

MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

Vol. 61
No. 3

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In This Issue:

Key West Celebrates the Completion
of the "Over-Sea" Railroad.

Increase in Petroleum Production in
the South in 1911.

A Broad Plan to Encourage Improve-
ment of Farm Home Environments.

The 1911 Southern Pig Iron Output.

Alphabetical Index, Page 118.

Classified Index, Pages 112 to 117.

Classified Opportunities, Pages 80, 81 and 82.

BALTIMORE, JANUARY 25, 1912

B. t. u. THE MEASURE OF HEAT

The term British thermal unit (abbreviated B. t. u.), often confronts the user of coal. As a yard stick is a measure of length, a B. t. u. is a measure of heat. The total amount of heat contained in a pound of fuel, all of which is liberated by complete combustion, is expressed in B. t. u.'s. A single heat unit is the amount of heat required to raise the temperature of one pound of water one degree Fahrenheit at atmospheric temperature. Heat units make steam and steam makes power. Below are tabulated, from some of the highest scientific authorities, the heat values of the commoner combustibles contained in coal:

SUBSTANCE	B. t. u. Per Lb.	
Acetylene Gas	21,465	Included in the "Volatile Matter" of proximate analysis.
Marsh Gas	23,515	
Olefiant Gas	21,345	
Hydrogen Gas	62,035	
Carbon	14,450	"Fixed Carbon" of proximate analysis.

CLINCHFIELD COAL IS HIGH IN HEAT VALUE

Clinchfield coal is rich in Hydrogen and the Hydro-Carbon gases shown above. These "VOLATILE" gases burn above the fuel bed with rapidity and great intensity in close proximity to the boiler surfaces. Quick liberation of heat units means quick generation of steam; hence the economy in using Clinchfield coal which maintains boilers at high capacity easily and continuously, thus delivering more than the rated horsepower. Clinchfield coal ranges from 14,000 to 14,700 heat units per pound, because it contains small percentages of oxygen, moisture and ash, which are valueless, and large percentages of the combustibles highest in heat value.

OUTPUT OF MINES OF CLINCHFIELD COAL CORPORATION 2,000,000 Tons Per Annum, and Growing CLINCHFIELD FUEL COMPANY


Selling Agent

SPARTANBURG, S. C.

Southern Terminal C., C. & O. Ry.

**PERFORATED METALS
FOR ALL USES**

You will find our prices and goods "RIGHT"
Send complete specifications.
Send for Metal sample plate. **Erdle Perforating Co., Rochester, N. Y.**



Drop Forging Machinery

Are you not using many castings that could be better and more economically made as drop forgings? Consider the saving effected in machine work by using drop forgings, also the saving of loss of machine work on defective castings. In addition you have a stronger and better-looking piece.


We will be pleased to take this matter up with you. On request, Drop Forging Machinery Cat. 13F.

"Presses for Every Requirement."

E. W. BLISS CO.

4 Adams Street BROOKLYN, N. Y.

Representatives for Chicago and Vicinity: Stiles-Morse Co., 362 Washington Boulevard, Chicago, Ill.



We are SPRING SPECIALISTS. You should know us.

SPRINGS OF
Flat,
Round
and
Square
Wire

All Shapes and Styles
High Grade Machinery Springs

SPRINGS OF
Steel
Brass
Music Wire
Phosphor Bronze
Etc.



Raymond Mfg. Co., Ltd., Corry, Pa.

"THE STANDARD" SCALES

Are Made Right, Weigh Right, and Are Sold at a Price that is Right. Will weigh from 1/4 ounce to 200 tons. If you need Good Scales write us for prices.

The Standard Scale and Supply Co. 243-245 Water Street, Pittsburgh, Pa.

NEW PLANT UP-TO-DATE NEW MACHINERY
Rome Scale & Manufacturing Co.
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MANUFACTURERS OF
SCALES AND TRUCKS
OF ALL KINDS.



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For all country road, street, outdoor advertising, railroad, posted estates, and mill purposes. The letters are cut into iron 1-16" deep, and the finished sign has a galvanized surface and black letter. On wood the sign shows any combination of colors. The signs are made by a new automatic machine which reduces cost one-half. Any size from 3 1/2 x 8 to 12 x 48". The only sign that will last a hundred years. Send for sample letter and advise for what purpose you will use sign.

INDESTRUCTIBLE SIGN COMPANY, BISHOPVILLE, S. C.



WHEELBARROWS OF ALL KINDS

Also the Largest Line of
DRAGS, ROAD AND WHEEL SCRAPPERS, HAND
CARTS, TRUCKS, Etc.

SYRACUSE CHILLED PLOW CO.

SYRACUSE, N. Y., U. S. A.

No. 62 Pig Iron Barrow.

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WE MAKE A SPECIALTY
OF SCALES FOR
RAILROADS
OIL MILLS
AND FERTILIZER WORKS

Our Catalogue contains every improvement known to modern science in the manufacture of heavy weighing machines.

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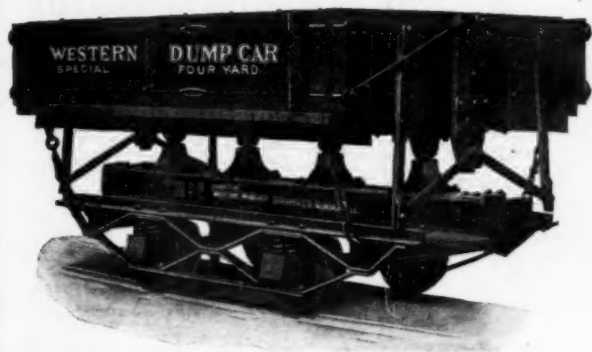
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S
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WESTERN DUMP CARS



4-Yard Car, 36-Inch Gauge

Contractors desiring to keep their outfits up to date are not satisfied with anything less than the genuine latest improved

WESTERN

The 1912 model is even farther ahead of any other on the market. Do not overlook the WESTERN 3-FOOT GAUGE SPREADER. Western 12, 16, 20 and 30-Yard Air Dump Cars, for rapid and economical handling of material on main lines. Send for catalog of earth and stone handling machinery.

Wheeled Scrapers	Drag Scrapers	Fresno Scrapers
Grading Plows	Elevating Graders	Dump Wagons
Rock Crushers	Road Machinery	Dump Carts

WESTERN WHEELED SCRAPER CO.
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Skilled labor, competent engineering and research facilities, and an abundance of capital have been correlated by efficient management and made to produce Columbia quality in incandescent lamps. This four-square progressive force has produced Columbia lamps for twenty-three years.

We believe we have reached the acme of efficiency and economical service in the Columbia Mazda lamp; we know these lamps may serve you well.

**The Columbia
Incandescent Lamp Co.**

Established 1889

ST. LOUIS, MO.

BRANCH OFFICES
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New York Minneapolis



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GOOD 46 Years Ago

BETTER 26 Years Ago

BEST TODAY



We have Equipped such
Plants as

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Sacramento, Cal.
B. C. Pottery Co.,
Victoria, B. C.
Plymouth Clay Product Co.,
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And in every city, town, village
and crossroads in the United
States where Sewer Pipe and
Clay Machinery is used.

Send for Catalogue
No. 27.

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Rice-Clerkin Co.**
Mfrs.

The Machinery Folks
of
**ARKON, OHIO,
U. S. A.**

ESTABLISHED-1862.
TAPLIN-RICE-CLERKIN Co.
AKRON, OHIO-U.S.A.

How about your transmission system?



Is all the power you produce, or buy from the
Central Station, available for production purposes?

Power companies charge for the power taken by the motors,
not for the actual horse-power delivered to your machines. In
a year, for even small power users, this difference amounts to
a considerable sum in money, which can be changed to other
important uses by using

The Morse Silent Rocker Joint Chain

It provides a silent flexible drive of fully 99 per cent. efficiency
in the transmission of any amount of power from 1/4 to 3000
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The "Rocker-Joint," an exclusive and most important feature,
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joint, greatly lengthening the life of the chain.

Years of experience in designing and making chains (our exclu-
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Bulletin No. 9 shows many applications of our chain. Write
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**INEXPENSIVE FIRE ALARM
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These systems will enable you to concentrate your employees at the source of the fire instantly.

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FUL FIRE FIGHTING.

WE HAVE MADE FIRE NOTIFICATION APPARATUS FOR
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RELAY STATION
BALTIMORE, MD.

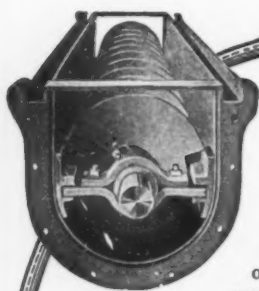
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Engines, Boilers and Pumps Repaired
Cylinders Bored Without Dismantling

WE ALSO BRAZE BROKEN CASTINGS

CORRESPONDENCE SOLICITED

THE STRICKLAND MACHINE CO.
RICHMOND, VA.



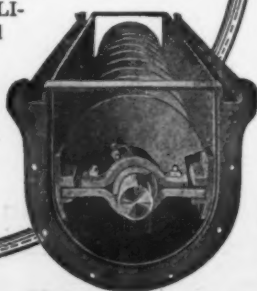
HELICOID

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MACHINERY

THE PROVEN SUPERIORITY

of all "N & M Co." milling
equipment rests upon its
unequalled record of

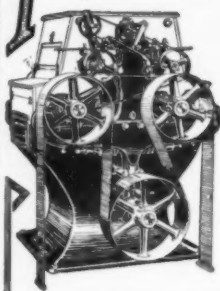
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Established during the past 60 years.

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AMERICA'S LEADING MILL BUILDERS

1833 W. MORRIS ST., INDIANAPOLIS, IND.
Sixty Years of Successful Manufacturing



SALEM FOUNDRY & MACHINE WORKS

SALEM, VIRGINIA

Manufacturers of FLOUR AND CORN MILL MACHINERY, WOOD SPLIT AND IRON PULLEYS,
RING OIL HANGERS, COUPLINGS, GEARINGS, COLLARS, Etc.

Shafting, Belting, Mill and Elevator Supplies in Stock.

Write for Prices.

Roll Corrugating a Specialty.

"STAR" MILLS

Established 1847

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make the old-fashioned
"WATER GROUND TABLE MEAL"

Write for prices and discount

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PLAIN and
LITHOGRAPHED

SOUTHERN CAN COMPANY
BALTIMORE, MARYLAND

One of the Largest Independent Plants

HAVE YOU TRIED

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TORCHES and OILERS

They are Guaranteed. Write

The P. Wall Mfg. Supply Co.
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The Robins Belt Con-
veyor was the original
and is today the standard
of this type of conveying
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It is successfully and
economically conveying
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similar materials under
the most trying condi-
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The Lower Run of a Hunt Standard Con-
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are Filled. The Bucket Standing Verti-
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Combines the following:

Rapidity of handling.
Low cost per ton.
Is noiseless in operation.
Cost for maintenance is less than that
of any other Conveyor.

Our engineers are ready to study your partic-
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economical methods.

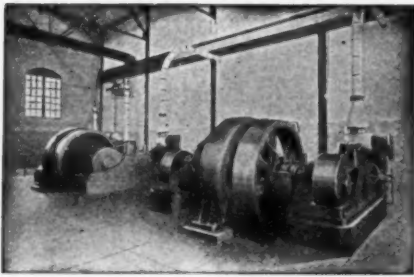
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Works—West New Brighton, New York

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San Francisco, 265 Monastock Bldg.
Washington, D. C., Evans Bldg.



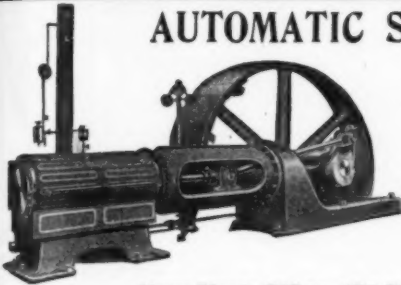
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For Electric Service

Ball Engine Company

ERIE, PA.

AUTOMATIC STEAM ENGINES



Simple and Compound.
For Belt or Rope Drive.
Direct Connected to Generator
or Ice Machine.

Mill Gearing a Specialty

The I. & E. Greenwald Co.

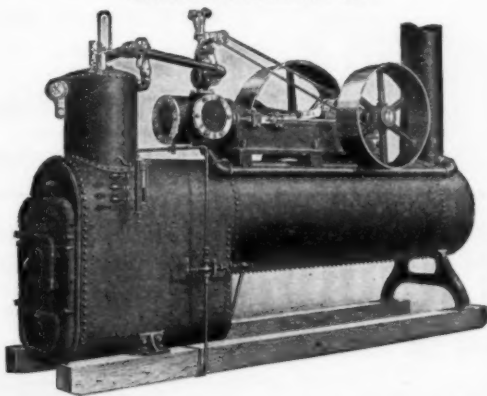
720 East Pearl Street

CINCINNATI, OHIO

New York Office, 150 Nassau Street

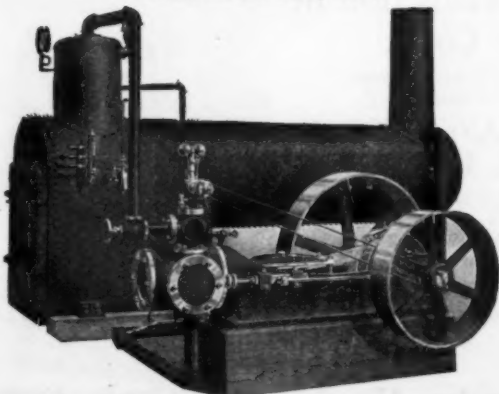
AMES IRON WORKS

MANUFACTURERS OF



ENGINES AND BOILERS

WORKS—OSWEGO, N. Y.



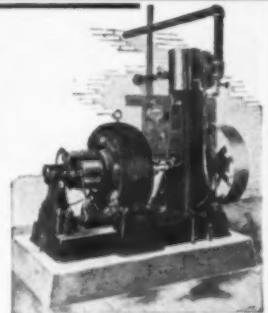
AGENCIES THROUGHOUT THE SOUTH

Are You Operating An Electric Light Plant of Your Own?

An "ABC" Vertical Enclosed Self-Oiling Steam Engine

direct connected to any good make of generator will supply current at a saving of 25% over buying from a central station. These engines practically take care of themselves, running anywhere from three to twelve months without adding new oil to original supply or making adjustments.

Where shall we mail Engine Bulletin No. 285-MR?

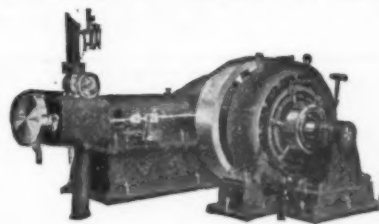


"ABC" Engine direct connected to dynamo for electric lighting industrial plant.

AMERICAN BLOWER COMPANY
DETROIT, MICH.
U S A

Phoenix Iron Works Company

BUILDERS OF



Automatic Cut-off Engines

ALSO

Boilers, Heaters, Tanks and Gas Condensers.

General Offices and Works,

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NEW YORK CITY, 135 William Street

COOPER CORLISS ENGINES

Complete Steam Plants a Specialty

THE C. & G. COOPER CO.

BUILDERS

Home Office and Works

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Friction
Represents
Wasted
Energy

Ridgway Side Crank Engines

are lubricated by the well known **Splash System** of automatic oiling.

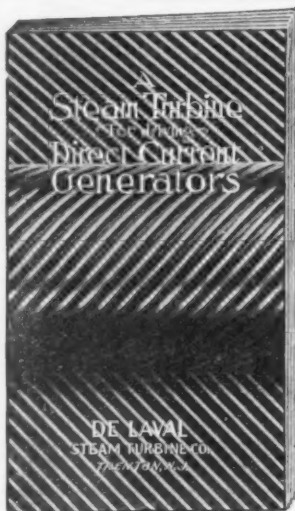
Bearings, pins and guides receive positive and copious lubrication with every revolution of the engine.

This means a minimum of friction and long life to wearing parts.

Furthermore, all hoods and cover plates are made oil tight, insuring cleanliness, and no possibility of oil throwing.

Bulletin 20-Z describes this machine fully.

RIDGWAY DYNAMO & ENGINE CO.
RIDGWAY, PA.



A Steam Turbine for Driving Direct Current Generators

The De Laval Multi-Stage Geared Turbine combines all the advantages of steam turbines in the way of simplicity, ability to utilize high vacuums, small space requirements and small cost for attendance with the reliability and efficiency of slow-speed direct current generators.

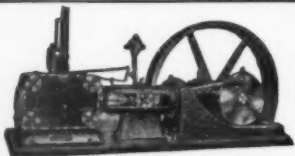
It gives an ideal unit for generating direct current for use in shops, power circuits, etc.

Ask for a copy of the booklet No. 45 illustrated herewith, describing this turbine and discussing the respective merits of different types of turbines.

DE LAVAL

STEAM TURBINE CO.

TRENTON, N. J.

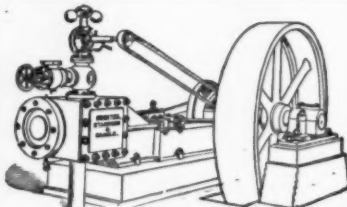


CORLISS ENGINES

Boilers of all Styles and Sizes
The Murray Iron Works Co.

INCORPORATED FEB. 1, 1870
BURLINGTON, IOWA

ENGINE ON EXHIBITION IN THE BOURSE
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HEAVY DUTY THROTTLING ENGINES

We build a larger number of this type than anyone else in America. Shaft governor Engines.

BOILERS—large finely equipped works.

THE HOUSTON, STANWOOD & GAMBLE CO., Cincinnati, O.



The Griffith & Wedge Co.

Established 1840

ZANESVILLE, OHIO, U. S. A.

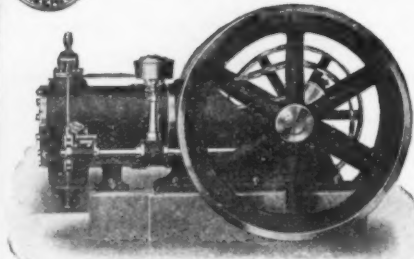
Manufacturers of

The Ohio Corliss Engine

SEND FOR CATALOGUE



CENTRAL STATIONS NEED A BOGART GASOLINE GENERATING SET



CARRIES PEAK LOADS EASILY WITHOUT EXTRA BOILERS.

Makes getting a day load easy for the small station.

The easiest to operate and maintain.

Is a money maker for the small station.

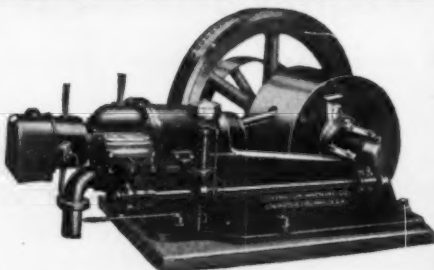
Full details and illustrated Bulletin No. 23 on request.



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BUFFALO, N. Y.

ASK YOUR
CONSULTING
ENGINEER



Dependable—Durable—Economical

Covington Machine Co.

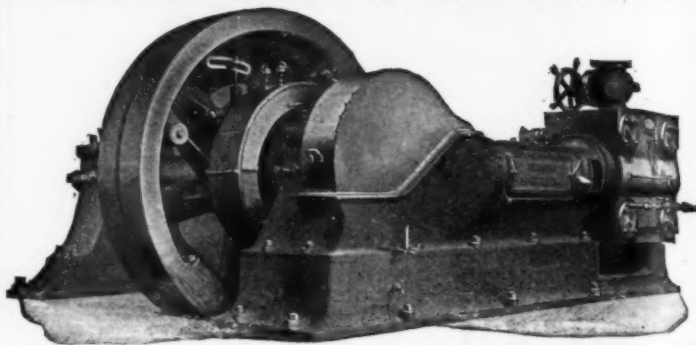
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COVINGTON OIL ENGINES

FLEMING-HARRISBURG ENGINES



Harrisburg Foundry & Machine Works, Harrisburg, Pa.

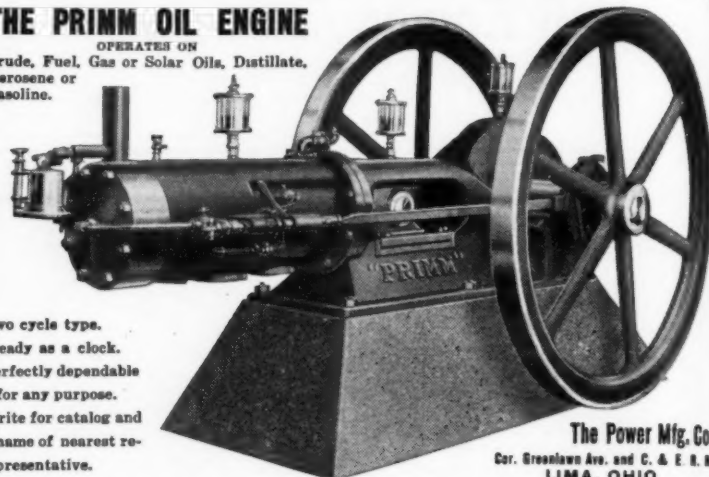
BALTIMORE OFFICE
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THE PRIMM OIL ENGINE

OPERATES ON
Crude, Fuel, Gas or Solar Oil, Distillate,
Kerosene or Gasoline.



Two cycle type.

Steady as a clock.

Perfectly dependable

for any purpose.

Write for catalog and

name of nearest re-

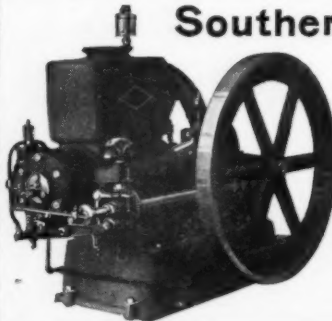
presentative.

That for week—Our engines run while you work.

The Power Mfg. Co.

Cor. Greenlawn Ave. and C. & E. R.
LIMA, OHIO

Southern Gasoline Engines



We make an improved heavy duty gasoline engine of all sizes for all purposes.

Agency Contracts Still Open

Write for Catalogues and full information.

Southern Engine & Boiler Works

Manufacturers

JACKSON, TENN.

GAS PRODUCERS

The Akerlund Soft Coal Producer is Reliable and Efficient

TWO TYPES:
POWER AND FURNACE

STANDRAD GAS POWER CO., Walton Bldg., ATLANTA, GA.

70% Reduction in Power Cost

has been made in many cases by using

FAIRBANKS-MORSE OIL ENGINES

They will save you the difference between the cost of cheap crude oil and that of the higher priced liquid fuels.

Thoroughly Reliable.

Easy Starting.

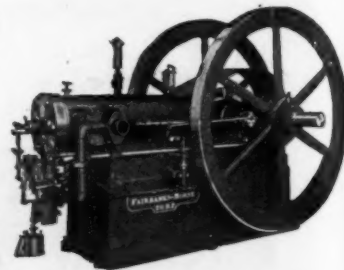
Furnished in single unit, vertical and horizontal types, up to 500 H. P. Power Plants up to 2000 H. P.

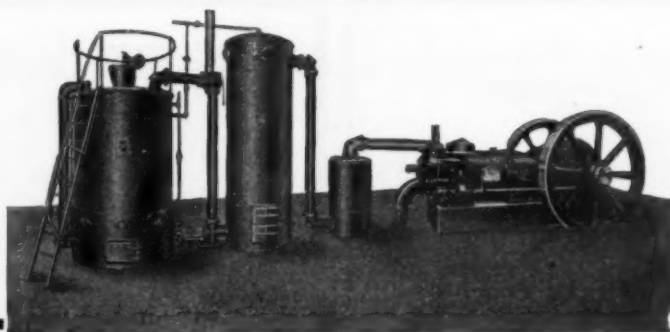
Write for Catalog No. 938PN.

Fairbanks, Morse & Co.,

Branches in Principal Northern Cities

Atlanta, Ga., Jacksonville, Fla.,
Richmond, Va., New Orleans, La.,
Main Office: 900 So. Wabash Ave.,
Chicago, Ill.





Will you waste 91% of the energy in coal under a steam boiler

or will you make a thorough investigation into the Otto Suction Gas Producer and Engine, with a waste not to exceed 20%.

9% OR 80% EFFICIENCY

Can't you use the excess coal bill money to better advantage in your business?

Our Bulletin No. 24 contains very interesting and convincing information on the advantage of Producer Gas over other fuel.

SEND FOR YOUR COPY TODAY



THE OTTO GAS ENGINE WORKS

3221 Walnut Street

Philadelphia, Pa.



Westinghouse ^{Direct-Current} Magnetic Switch Elevator Controllers

To suit various kinds of service these controllers are made in five classes, as follows:

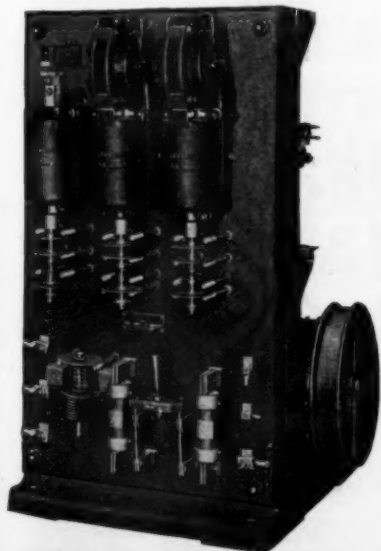
Class 1. Full-Magnetic, Two-Speed Controllers for High-Speed Passenger Service.

Class 2. Full Magnetic, Single-Speed Controllers for Passenger and Freight Service.

Class 5. Semi-Magnetic Controllers for Slow-Speed Freight Service.

Class 3. Full-Magnetic Controllers for Slow-Speed Service.

Class 4. Semi-Magnetic Controllers for Slow-Speed Passenger and Freight Service.



Semi-Magnetic Elevator Controller

The Full-Magnetic Controllers make all the connections necessary in starting and regulating the speed of the motor, by means of magnet switches that are controlled by the elevator car switch. The Semi-Magnetic Controllers have a mechanical starting and reversing switch, operated from the elevator by a hand rope or lever.

In both types the acceleration of the motor speed is effected automatically by means of the magnet switches.

The operator simply closes the operating circuit of the switches, the starting resistance is then cut out automatically in several steps in the shortest time consistent with safe and economical operation.

Ask nearest office for Descriptive Leaflet 2382

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Birmingham, Ala.	Cincinnati, Ohio.	Joplin, Mo.	Minneapolis, Minn.	Richmond, Va.	Syracuse, N. Y.
Bluefield, W. Va.	Cleveland, Ohio.	Kansas City, Mo.	New Orleans, La.	Rochester, N. Y.	Tacoma, Wash.
Boston, Mass.	Columbus, Ohio.	Knoxville, Tenn.	New York, N. Y.	St. Louis, Mo.	Toledo, Ohio.
Buffalo, N. Y.	Dayton, Ohio.	Louisville, Ky.	Omaha, Neb.	Salt Lake City, Utah.	Washington, D. C.
Butte, Mont.	Denver, Colo.	Los Angeles, Cal.	Philadelphia, Pa.	San Francisco, Cal.	Wilkes-Barre, Pa.
Charleston, W. Va.					

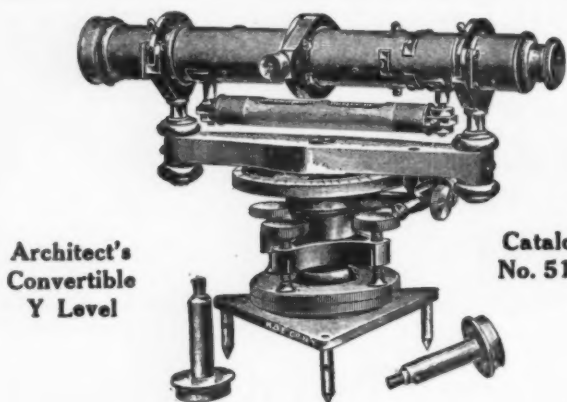
Westinghouse Electric & Manufacturing Co. of Texas, Dallas, El Paso and Houston, Texas.

Canada: Canadian Westinghouse Co., Ltd., Hamilton, Ont.

Mexico: Compania Ingeniera, Importadora y Contratista, S. A. (Successors to G. & O. Braniff & Company), City of Mexico.



Full-Magnetic Elevator Controller



Architect's
Convertible
Y Level

Catalogue
No. 5115

MANUFACTURERS find that our CONVERTIBLE - Y - LEVEL

is useful for aligning shafting, walls and columns.

ARCHITECTS, BUILDERS and CONTRACTORS will save time, labor and chance of error in leveling ground, checking excavation work, foundations and floors by using one of these instruments.

KEUFFEL & ESSER CO.

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Incandescent Lamps

Unexcelled for Life, Brilliancy or
Uniformity

Motors and Dynamos

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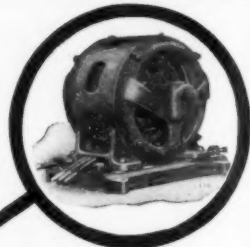
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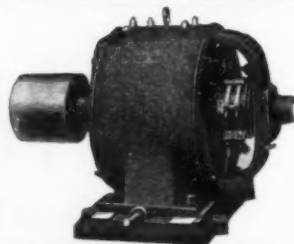
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The battery consists of 152 cells, each cell containing 133 plates, type H "Exide", making a total of 20,216 plates. The total weight of the cells is over 1,000,000 lbs.—it required 51 cars to ship the battery material from Philadelphia to Baltimore. This battery has a capacity of 44,000 amperes for 6 minutes—approximately 9000 K. W.

This is the 186th battery installed by The Electric Storage Battery Co. for Central Station service. These batteries range in capacity from about 3 K. W. to 9000 K. W.

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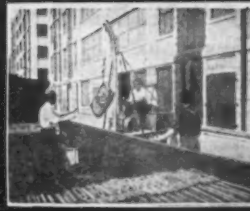
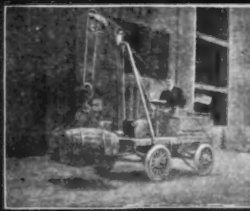
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This truck crane can go a moderate distance and get back with a load on its hook quicker than the same load can be lifted onto any other kind of vehicle.

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By using three trains of trailers the truck is kept constantly busy.

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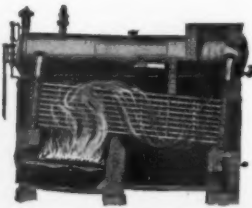
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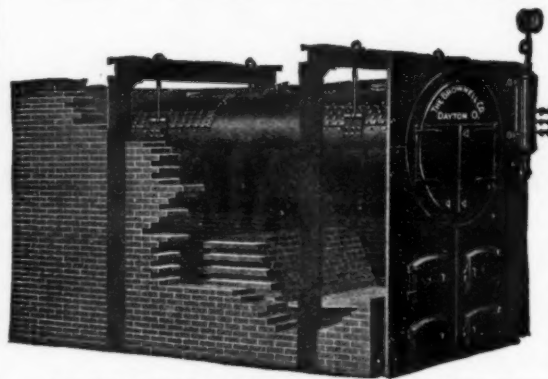
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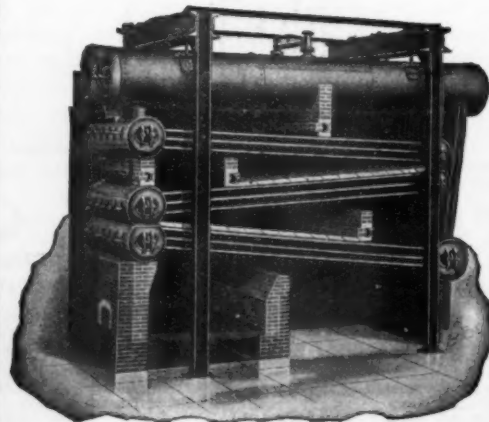


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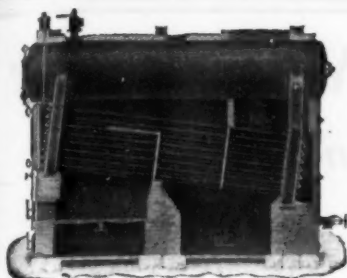
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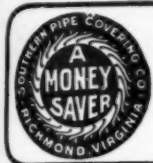
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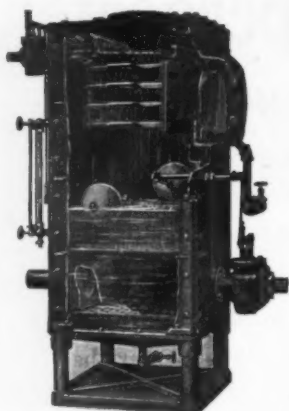
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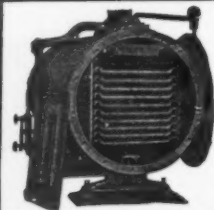
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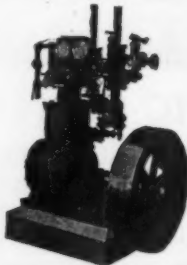
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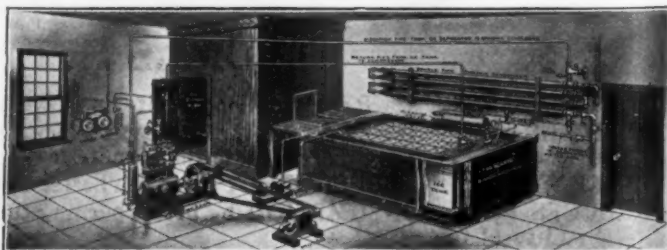
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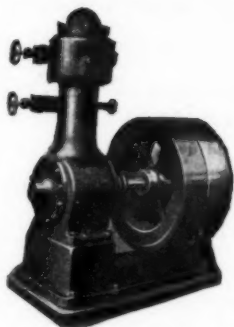
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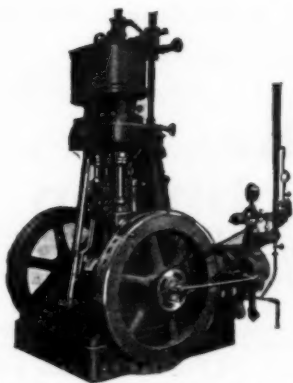
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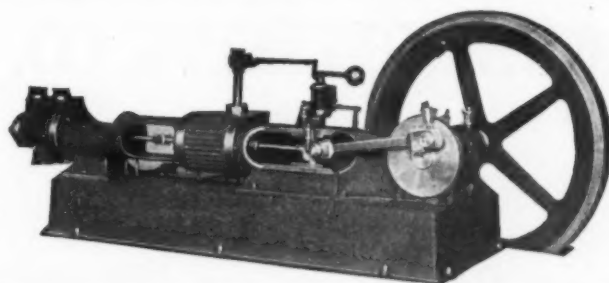
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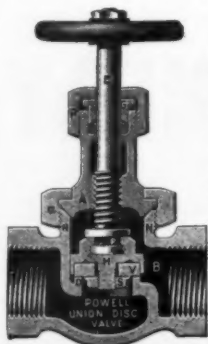
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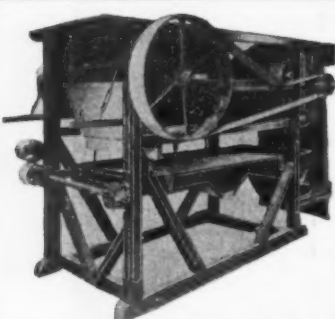
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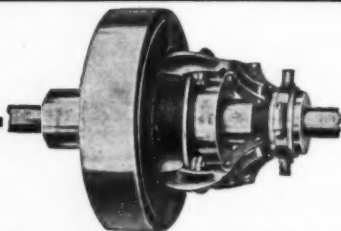
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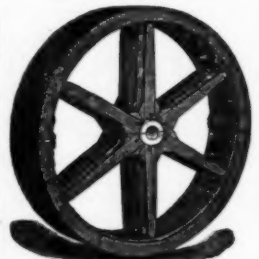
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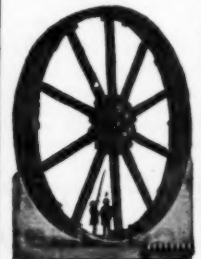
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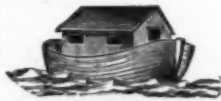
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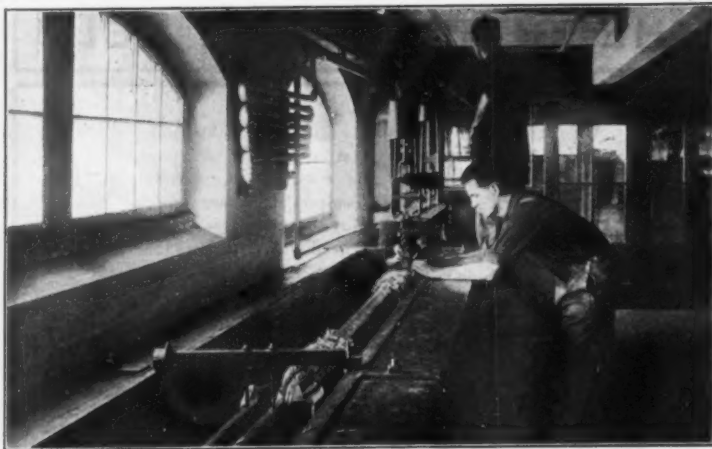
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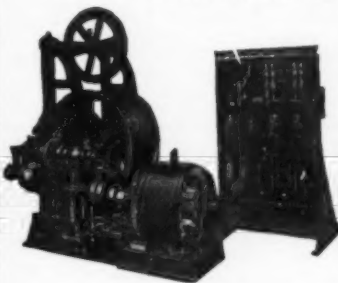
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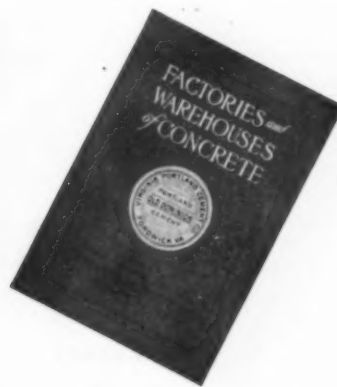
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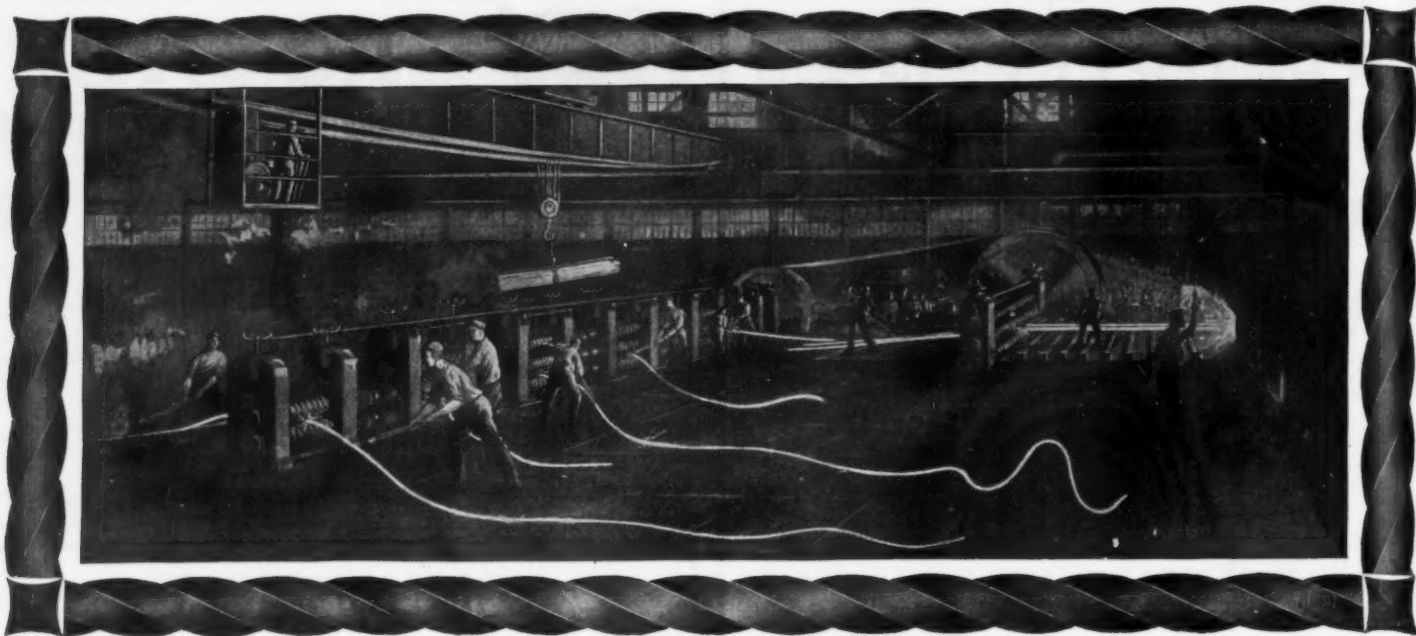
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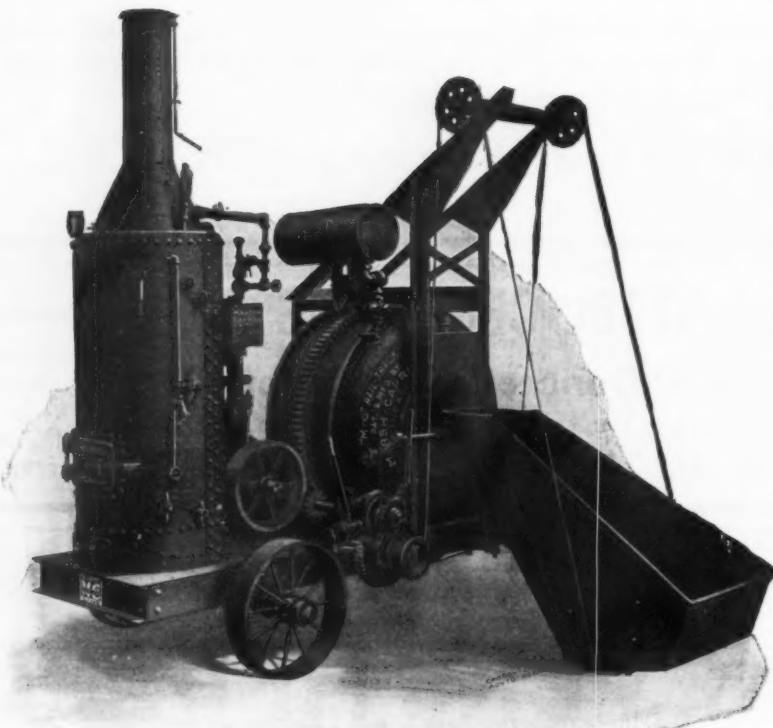
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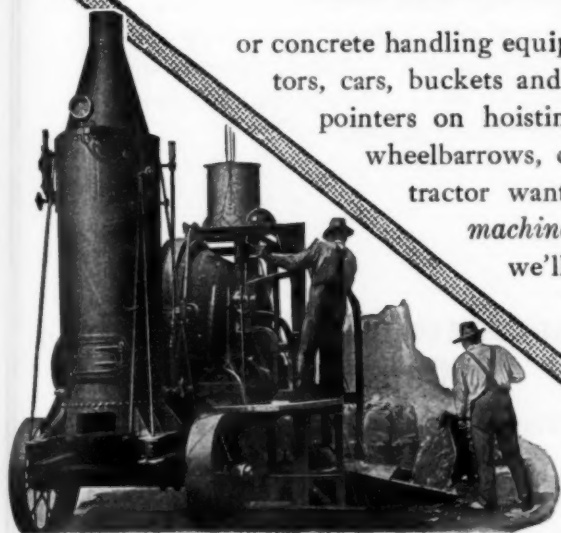
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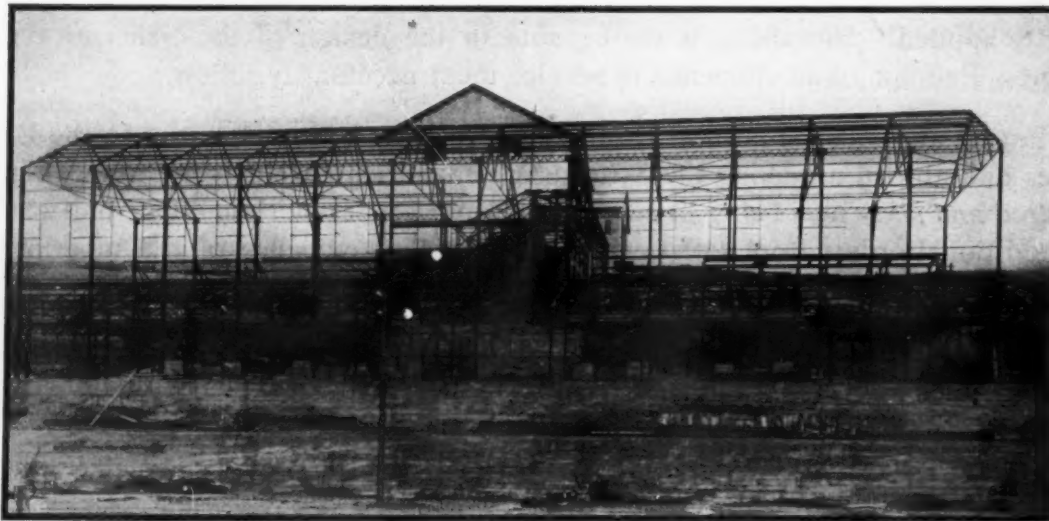
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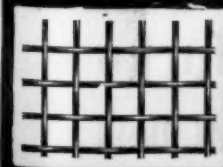
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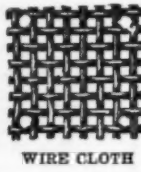
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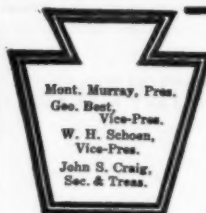


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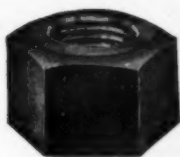
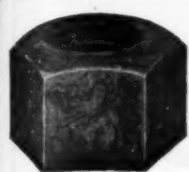
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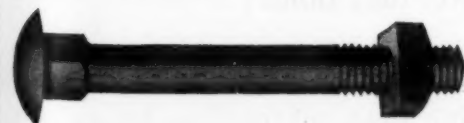
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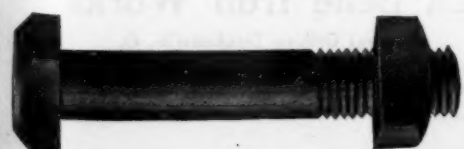
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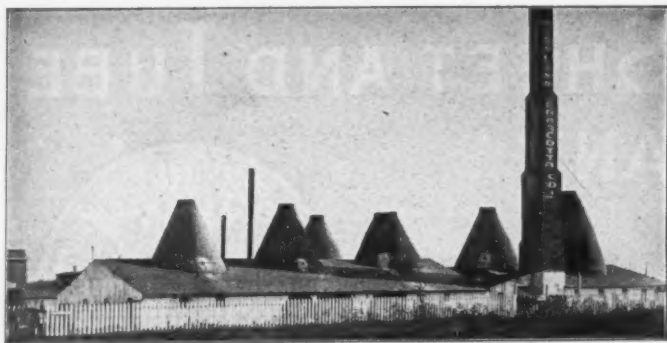
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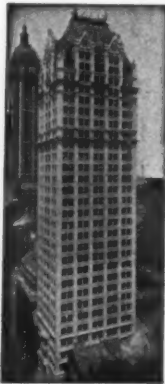


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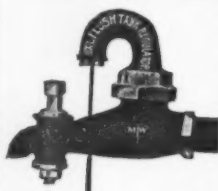
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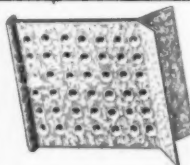


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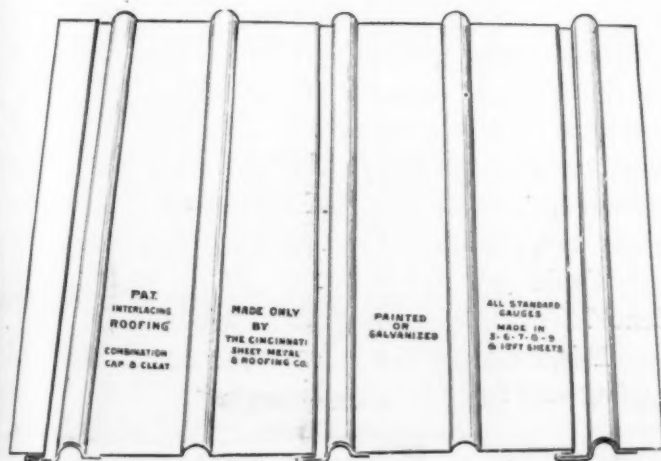
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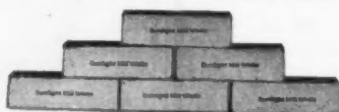
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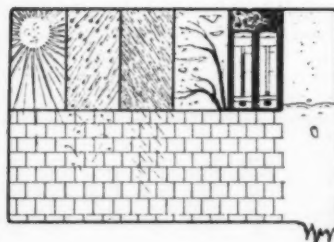
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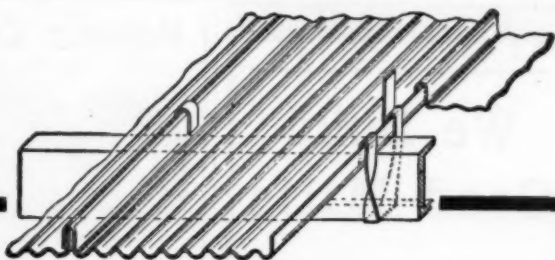
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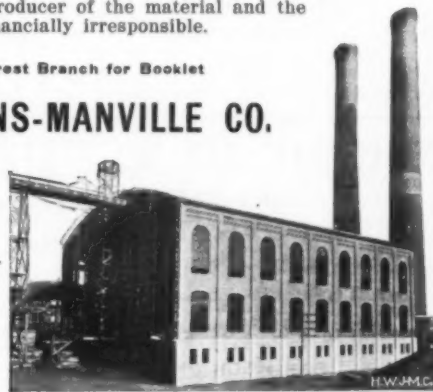
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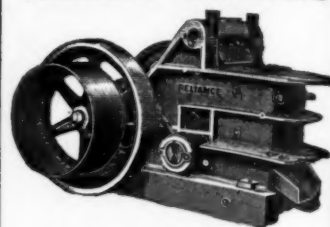
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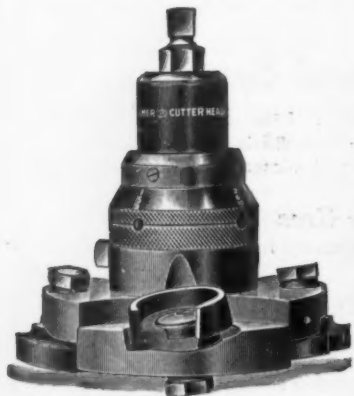
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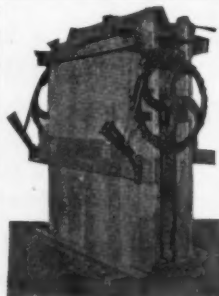
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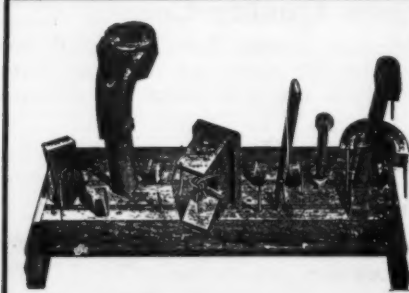
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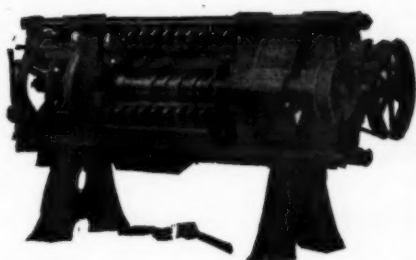
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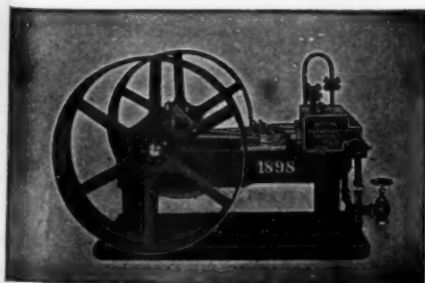
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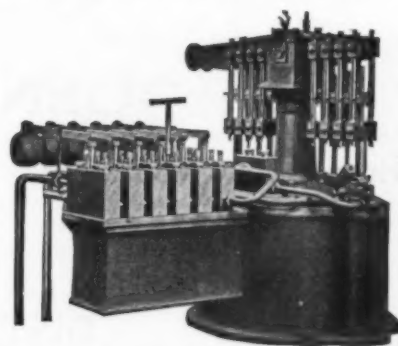
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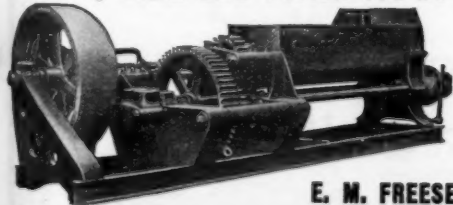
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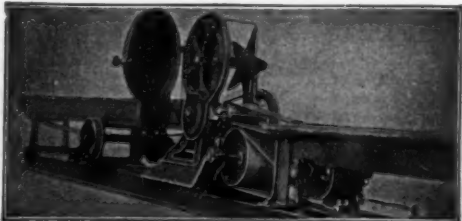
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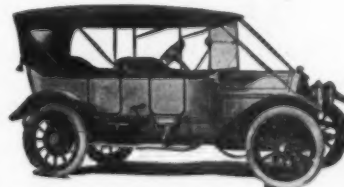
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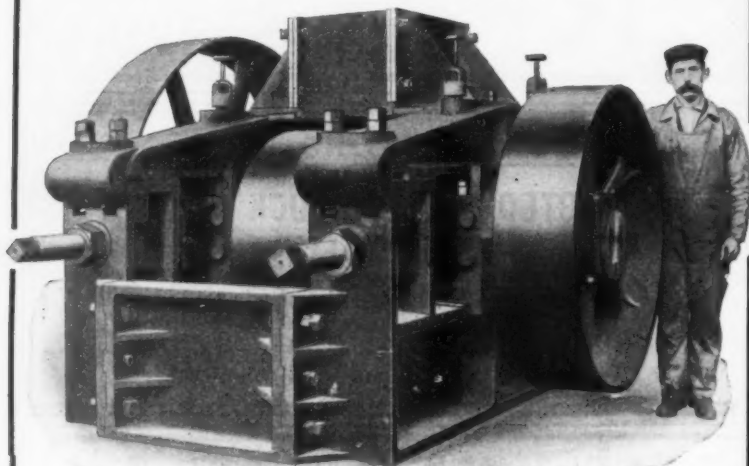


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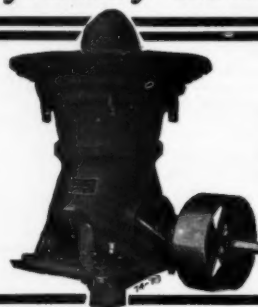
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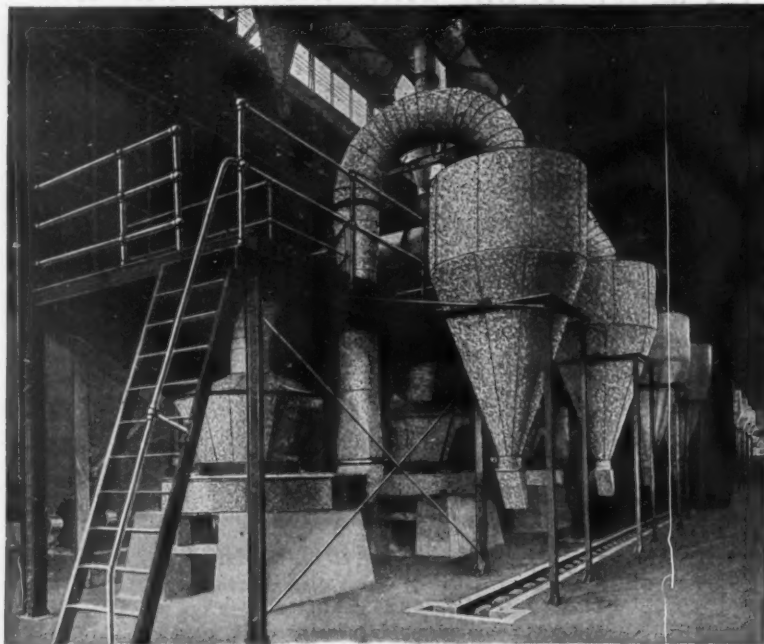
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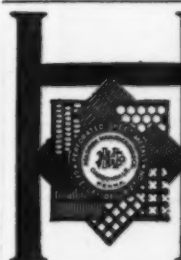
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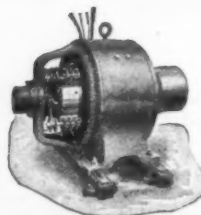
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Trade-Name Registered in the U. S. Patent Office

Vol. LXI. No. 3.
WEEKLY.

BALTIMORE, JANUARY 25, 1912

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Manufacturers Record.

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[Entered at the Baltimore Postoffice as sec-
ond-class matter.]

BALTIMORE, JANUARY 25, 1912.

SOUTHERN PIG IRON.

In 1911 between 24,000,000 and 24,500,000 tons of pig iron were made in this country. Of the total, 3,011,386 tons were made in the South. The production by States in the South is shown by the following figures, kindly furnished to the MANUFACTURERS RECORD by Mr. James M. Swank, general manager of the American Iron & Steel Association of Philadelphia:

Production of All Kinds of Pig-Iron in the Southern States from 1906 to 1911, in Gross Tons.

States.	1906.	1907.	1908.	1909.	1910.	1911.
Alabama.....	1,674,848	1,686,074	1,397,014	1,763,617	1,939,147	1,712,443
Georgia.....	150,502	104,376	67,294	97,983	64,215	38,163
Missouri.....	98,127	127,946	45,096	86,371	100,509	95,202
Texas.....	386,709	411,833	183,502	286,856	326,214	255,816
Kentucky.....	426,874	393,105	290,826	333,845	397,569	324,648
Maryland.....	483,525	478,771	320,458	391,134	444,976	293,542
Tennessee.....	304,534	291,066	65,551	228,282	174,661	291,472
Virginia.....						
West Virginia.....						
Total.....	3,525,119	3,493,772	2,369,741	3,188,091	3,447,291	3,011,386

The record of pig-iron production made in 1910 by the whole country was not maintained in 1911. Indeed, in the second half of 1910 production was 2,653,909 tons less than in the first half of that year. This slackening extended into 1911, with a decrease in the first six months of that year under the last six months of 1910 of 659,033 tons. The total output of 1911 was between 2,500,000 and 3,000,000 tons less than the total output of 27,303,567 tons in 1910. The South shared in this decline. Its 1910 production was not up to that of its record year, 1906, when 3,525,119 tons were produced, but it was an increase of 269,200 tons over the 1909 output, still reflecting the financial disturbances of the preceding year. The 1911 output, however, was 435,905 tons

less than that of 1910 and 176,705 less than that of 1909.

A ROAD OF INTERNATIONAL IMPORTANCE.

In a lengthy editorial based on the recent description in the MANUFACTURERS RECORD of the Key West extension of the Florida East Coast Railroad, the Dallas News comments on this work and its great importance to the country, and in closing says:

As a financial enterprise this is undoubtedly the boldest ever undertaken by an individual; it takes rank among the foremost engineering feats of the world, while as an economic factor it is conspicuous in an age of great and far-visioned things.

The opening celebration at Key West on Monday last of this "over-sea" railroad extension was fittingly made of an international character. This road, probably more than any other railroad in the United States, broadens out into international importance. There are many other railroads far greater in mileage and in the volume of traffic, but here is the most unique railroad ever constructed, the operation of which will focus the world's attention on Florida and the South in connection with the rapid development of the West Indies and the enormous expansion of commerce sure to come through the early completion of the Panama Canal and the resultant growth in our trade with Central and South America and the Orient. The power of the National Government in dominating the situation in the Gulf of Mexico and on to Panama is greatly strengthened, and the worldwide publicity which will be given to this "over-sea" railroad will result in drawing many thousands of travelers

from the United States through Florida to Cuba and Central America, and likewise from Central and South America and the West Indies to Florida and thence northward. No other railroad of modern times has received such universal attention and such wide publicity in the daily and weekly press, and in the foremost magazines of the land. It is indeed fortunate that Mr. Flagler, 82 years young instead of 82 years old, has lived to see the carrying out of this great dream, and to realize that the business world now recognizes that that which a few years ago was thought to be a visionary project has come to be regarded in the most conservative financial centers as a daring stroke of genius destined to fully measure up to the hopes of its projector and builder.

FOREIGN CHEMISTS AND THE SOUTH.

President W. W. Finley of the Southern Railway Co. realizes the benefit to be derived from a visit to that section by the delegates from abroad, in number about one thousand, to the International Congress of Applied Chemistry, which is to meet in Washington and New York in the fall of this year, and in a letter to the MANUFACTURERS RECORD he writes:

Mr. M. V. Richards, land and industrial agent of this company, has had this matter up with Dr. David T. Day of the United States Geological Survey, and has arranged to co-operate closely with him in the preparation of a schedule for the movement of the delegates to the Congress through the Southeastern States and to aid in working up local interest and plans for the entertainment of the delegates at points where stops are to be made. We shall keep actively in touch with this matter and do all that we properly can to aid in inducing a large number of delegates to visit the Southeast and become acquainted with the variety and richness of the resources of our section.

The States of the South through which the lines of the Southern Railway system and its allied roads extend are full of resources appealing directly to men who are concerned with the application of the science of chemistry to the commercial arts and industries. These resources include not only vast deposits of minerals used in the chemical arts, but also the materials for fuels and the other means for developing them. The South is the home of the great bulk of sulphur produced in this country, which in the past seven or eight years has come to dominate the sulphur trade of the world. It is the center of the phosphate fields of the United States now being worked, and of the manufacture of fertilizers; already nitrates of the atmospheres are being fixed for agricultural purposes through electrical processes; the lead and zinc and copper industries and the utilization of the wastes of lumbering are increasing the opportunities for chemists, and the production of natural gas, petroleum, pyrites and other minerals is occupying their attention more and more.

Mr. Richards, with his intimate knowledge of the resources of the territory served by his company, may be depended upon to facilitate the purpose of President Finley to make as effective as possible for the South any tour through that section that may be arranged for the visiting chemists.

DISASTROUS TO ABOLISH THE REVENUE CUTTER SERVICE.

American commercial and maritime interests are amazed at the suggestion, in the report of the "Commission on Economy and Efficiency," recently transmitted to Congress by the President, to the effect that without detriment to the country \$1,000,000 annually might be saved by abolishing the United States Revenue Cutter Service. That amazement will be shared by other countries

as soon as the significance of the suggestion has been realized by them.

For the maintenance of the Revenue Cutter Service \$2,500,000 are spent annually. In the fiscal year ended June 30, 1911, the results of this expenditure were partly shown in 55 human lives saved and 173 vessels, valued with their cargoes at \$9,488,000, and having on board 4345 persons. Moreover, 21 derelict vessels were disposed of, either by being towed into port so that their cargoes were saved, or by being destroyed, so as to prevent them from being a menace to navigation. The United States is the only country which has systematized this work of removing derelicts, and with such success that other countries are planning similar work.

The efficiency of the Revenue Cutter Service and the consequent value of it to the country is not a matter of chance, but has been determined by specialization on many lines since the establishment of the service, 122 years ago, eight years before the Navy came into existence. It calls for the preliminary training on lines similar to the curriculum of the Naval Academy, if not carried as high and not extending to the strictly warlike business of the Navy, as a preparation for a career of the strictest discipline, highest courage and greatest effectiveness. A number of its most efficient officers are graduates of the United States Naval Academy at Annapolis. Formerly it was given vessels deemed of no use to the Navy, and used them with splendid results in the work of salvage of live and property. But of late years fine boats, specially designed for this service, have been built as needed. The Revenue Cutter Service has to be prepared to use force in the maintenance of the navigation laws, in quelling mutinies or other disturbances on board vessels and in preventing illicit sealing, etc., and the services rendered by its vessels in Cuba and the Philippines as auxiliaries to the Navy in the war of 1898 emphasized its high standing and usefulness. Striking illustrations of this fact are given in a number of items published in the latest weekly issue of the *Army and Navy Register*, telling the news of assistance given by the Revenue Cutter Service to vessels in distress, including a German steamer and a British steamer. Among the items were the following:

On January 11, while the Itasca was on the lookout for a barge reported awash off Frying Pan Shoals, information was received of the steamer Madeline, abandoned January 10, 15 miles northwest of Lookout Light Ship. While searching for this vessel a wireless message was received by the Itasca reporting the oil steamer Northwestern, with propeller gone, 55 miles southwest of Cape Lookout Shoals Light Ship, needing assistance. The Itasca experienced little difficulty in finding the steamship on the same day reported. After waiting for the gales to moderate the cutter took the Northwestern in tow and proceeded to Southport, N. C., where she arrived on the 17th inst. The Northwestern had a cargo of crude petroleum bound for Beverly, Mass., from Port Arthur, Tex. The Itasca left Wilmington

January 17, where she had gone for coal, at daybreak to assist the steamer Arabia, reported ashore on Lookout Shoals.

On January 15 the Yamacraw reported standing by the British steamer Crabton Hall, ashore on Caskin Bank, Ga. The cutter assisted several tugs to float the steamer, which was accomplished the next day at high water.

While the Yamacraw was proceeding January 12 to Cape Lookout to make search for the steamer Madeline a wireless message was received from the Clyde steamer Huron that the three-masted schooner Estelle was in distress 35 miles W. S. W. from Frying Pan Shoal whistling buoy and required immediate assistance. Early the same day the schooner was found making flare-up lights to attract attention. Her foresail and mainsail were torn and main gaff and boom carried away, lifeboat smashed, stern of vessel broken in, and the cabin full of water. The master stated that immediate assistance was necessary, as his vessel would sink if caught in another storm. Furthermore, that his cargo of fish products would catch on fire if water got into the cargo space and he could not abandon the ship. With the weather overcast and threatening, the Yamacraw started with his tow for Charleston. The weather increased to a gale, accompanied by thick squalls of snow and sleet. At the entrance of the harbor the weather was so thick and the sea so rough that it was deemed inadvisable to try to enter. The next morning the cutter anchored the schooner in the harbor. In the opinion of the master, he believed his vessel would have been lost during the night of the 12th instant had she not been taken in tow by the Yamacraw, and that the severe weather that followed would have caused the vessel to fill with water and set the fish products on fire. The firm of C. W. Crane & Co. of 38 South street, New York, as agents of the schooner Estelle, has written a letter of appreciation to the department for the service rendered by the captain and crew of the Yamacraw in rescuing their schooner.

The commanding officer of the Onondaga January 17 reports by wireless rendering assistance to the Hamburg-American liner Bethania, a vessel valued at \$1,200,000, of 500 tons burden, and 480 feet long, aground in Chesapeake Bay. Later in the day the department received information that the Onondaga had moved the steamship about 50 feet. Information has since been received that with the assistance of the Apache the Onondaga floated the steamer.

The Forward January 16 left her station to proceed to the assistance of the stranded schooner William B. Wilson, ashore on the Florida Reefs, 10 miles east of Alligator Lighthouse.

Another item in the same issue of the *Army and Navy Register* tells of the work done by the Onondaga in its ready assistance given the United States torpedo boat destroyer Warrington, as follows:

The Warrington was run into off Cape Hatteras on the morning of December 28 by an unknown vessel and had her entire stern cut off as clean as with a knife, reached the Navy-yard, Norfolk, Va., a little after 6 P. M. December 29, and was at once placed in dry-dock. After the collision occurred the revenue cutter Onondaga, Capt. D. F. A. de Otte, rushed to the aid of the Warrington when she received a wireless message. She picked up the disabled Warrington and took her in tow for Norfolk. It was nasty work in running a line to her and transferring some of her crew in the heavy seas, but the Onondaga was fully equal to the emergency. The Warrington was only saved from immediate sinking after the collision by her after-bulkhead. She lost about 25 feet of her stern. * * * Lieutenant-Commander Walter M. Hunt, commanding the Warrington, in speaking of the accident, is quoted as follows:

"We are lucky to be alive. For a time I did not think the ship would be saved, and I certainly thought some of us would go down with her. We were laboring in a heavy sea, with the wind blowing 40 miles an hour, when suddenly we felt a terrific crash, and our ship appeared to rise up out of the water. Most of the men were asleep and they were hurled from their hammocks to the deck below, several of them sustaining slight hurts. Water poured into our aft compartments, and the men rushed to their posts. * * * The bulkheads held perfectly, and after we got our bearings we found that we would remain afloat for some time at least. When the revenue cutter Onondaga reached us the storm was still raging. We decided it would be best to take off the greater portion of our crew. The transfer

from the Warrington to the Onondaga was made in lifeboats and was accompanied with some danger.

Last Saturday the country was thrilled by the story of the rescue by the Itasca of the crew of a three-masted schooner ashore and in a serious position two and a half miles off Hatteras. The life-saving men had been unable, because of the storm, to rescue all of the men, and the Itasca and Onondaga were ordered to the relief, and left the capes of the Chesapeake in a dense fog early Saturday morning, with the result as stated.

Such work is known and appreciated by maritime interests ranging from the ice-bound fishing harbors of New Foundland, where two of the revenue cutters are now extricating Gloucester fishing schooners from their perilous positions, to Cape Cod and to Hatteras, two of the marine graveyards of the world, along both coasts of United States and on to Alaska, where every spring vessels are helped through the ice to Nome, and to Point Barrow, still farther north, where the service extends into the Arctic Circle for the relief of whalers and natives. An overwhelming flood in territories along the coast finds the revenue cutter vessels prompt to save from death by drowning and to give other relief, and the menace of yellow fever or other disease from abroad finds the cutters on guard between the ports and vessels incoming from affected districts.

As a saver of life and property the Revenue Cutter Service has no equal of its kind, and Chambers of Commerce, maritime exchanges and other business bodies which have the knowledge of its work understand that the \$2,500,000 spent for its maintenance is one of the best investments made by the country through its Government. They will share the conviction of the well-informed that the abolition of this service would be disastrous to the country.

DEMANDS UPON THE FOREST.

The increasing demands upon the forests of the country which those of the South are being called upon more and more every year to meet are reflected in the figures showing the increases in the amounts of different woods used in the manufacture of veneers and pulp wood and in wood distillation between 1907 and 1910. In 1907 there were 131 establishments reporting upon wood distillation, of which 100 used 1,219,771 cords of hardwoods and 31 used 62,349 cords of soft woods. By 1910 the number using hardwoods had increased to 117, and they consumed 1,257,997 cords, while 30 soft-wood establishments used 192,442 cords. Of the establishments using hardwoods in wood distillation in 1910 for the derivation principally of charcoal, crude wood alcohol and gray acetate of lime, there were one each in Alabama, Kentucky, Maryland, Missouri, Tennessee and West Virginia. Of the 30 using soft woods, of which sawdust, slabs and other mill waste constituted about one-quarter of the material, and limbs, stumps, etc., another fourth, in deriving, by the destructive process or by the steam process, turpentine, tar, charcoal and heavy oils, four were in Alabama, six in Florida, five in South Carolina, four in Georgia, two in Louisiana and five in North Carolina. The great majority of the wood distillation establishments using hardwoods are in the States outside the South, but the trend of events in this field is shown in the fact that whereas between 1907 and 1910 the wood consumed in such

establishments increased by 168,319 cords, or only at the rate of 13.1 per cent., the soft woods used in distillation in establishments confined almost exclusively to the South increased by 130,093 cords, or at the rate of 208.6 per cent.

Woods used in the manufacture of pulp for paper include spruce, hemlock, poplar, balsam, fir, pine, beech, cottonwood and white fir, and most of it has been used in the North and West. But in 1910 North Carolina, Virginia and West Virginia consumed 115,993 of the 1,473,542 cords of domestic spruce, 67,896 of the 610,478 cords of hemlock, 34,885 of the 315,717 cords of poplar, 20,661 of the 105,882 cords of pine and 47,640 of the 262,637 cords of slabs and other mill waste. There are pulp-making establishments in Maryland, South Carolina and Texas also, and in the last-named State has been successfully demonstrated the availability of pine shavings and other waste in paper-making. Pine and other woods which grow principally in the South will be required for pulp-making in greater and greater quantities; for, while all woods thus consumed increased in quantity between 1907 and 1910 from 3,962,660 cords to 4,094,306 cords, or by 131,646 cords, equal to something less than 3 per cent., the amount of pine thus used increased from 78,583 cords to 105,882 cords, or by 27,299 cords, equal to 36 per cent.

The uses for veneer have in recent years become more and more diversified, and from being confined principally to a few hardwoods selected for the beauty of their grain and used in high-grade furniture and cabinet works, have come, with improvements in machinery and in methods of drying, to be used in making packing boxes, berry cups, fruit baskets, draw bottoms, glass backing, butter dishes, wooden plates, etc., and the turn has been made from the hardwoods to the soft woods. Of the 460,945,000 feet, log scale, consumed in 1910 in the manufacture of veneer, 158,157,000 feet were red gum, 40,324,000 yellow pine, 39,471,000 maple, 33,812,000 yellow poplar, 33,149,000 cottonwood, 33,005,000 white oak, 27,633,000 birch, 26,548,000 tupelo, 17,272,000 elm, 11,003,000 beech, 9,769,000 red oak, 6,271,000 spruce, 2,724,000 walnut, 2,548,000 sycamore, 2,356,000 ash, 2,006,000 Douglas fir, 1,736,000 chestnut and 2,611,000 all other woods.

The marked increase in the quantity consumed in the South compared with that in the rest of the country is shown in the following table:

State.	Feet consumed.	
	1910.	1907.
Alabama.....	26,966,000	9,512,000
Arkansas.....	34,177,000	5,769,000
Florida.....	25,842,000	18,183,000
Georgia.....	7,576,000	4,567,000
Kentucky.....	26,634,000	19,043,000
Louisiana.....	4,430,000	2,688,000
Maryland.....	7,427,000	7,457,000
Mississippi.....	9,267,000	4,570,000
Missouri.....	31,505,000	27,003,000
North Carolina.....	27,139,000	18,766,000
South Carolina.....	1,712,000	3,672,000
Tennessee.....	27,665,000	27,822,000
Texas.....	8,584,000	5,410,000
Virginia.....	20,649,000	20,543,000
West Virginia.....	3,848,000	2,871,000
Total.....	363,421,000	177,936,000
United States.....	477,479,000	348,523,000

Between 1907 and 1910 the consumption increased in the South from 177,936,000 feet to 263,421,000 feet, or by 85,485,000 feet, equal to 48.2 per cent., and in the rest of the country from 170,587,000 feet to 214,058,000 feet, or by 43,471,000 feet, equal to 25.5 per cent. There was an increase in consumption in every one of the Southern States ex-

cept Maryland, South Carolina and Tennessee. These facts suggest not only the possibilities in industry in the use of former wastes of the lumber industry, but also the advantage of such utilization as checking to some extent the inroads upon the Southern forests.

THE BROADLY-INFORMED BUSINESS MAN.

A close reader of the *MANUFACTURERS RECORD*, expressing the hope that the *RECORD* may long continue to spread "the intelligence of the vast possibilities of the South and the great Southwest which comes within its scope," adds:

One has to really cover the section of the country that the *MANUFACTURERS RECORD* is "crying out" for in order to fully appreciate the great truths it is expounding in regard to the richness of the soil, the natural resources, the potent possibilities and the rare opportunities held out. When I read in the *MANUFACTURERS RECORD* mention of the things being done in Texas, Oklahoma and Louisiana I can appreciate them a hundred per cent. more than I ever did before, now that I have covered that territory.

This writer has within the last year or two traveled over much of the Southwest, and has seen for himself the wonderful development of that section. Prior to that his life had been spent largely in Alabama and the nearby States, and therefore, except through what he saw in the *MANUFACTURERS RECORD*, he knew comparatively little of the progress of other parts of the South. His viewpoint has broadened. He now understands the whole South as never before.

This is a point to be considered by every man who wants to keep well informed not only about his immediate community, but about the entire South and Southwest. The man who does not do this grows narrower instead of broader. He sees the progress of his immediate community, but knows comparatively little beyond that.

Some time ago the writer was talking with one of the best-informed coal and iron men of Alabama, who was, however, very greatly surprised to hear of some of the remarkable progress that has been made in coal and coking interests in West Virginia and Kentucky. In reality, he seemed to think that the big coal development of the South was in his own State, and he had but little real knowledge of the rapid progress that is being made in the industrial interests, especially in coal-mining and coke-making, in other parts of the South. And yet he accounted himself a broadly-informed business man. Not having traveled over other parts of the South to study these things in person, and not having closely followed what the *MANUFACTURERS RECORD* has for years been publishing, he was to a large extent ignorant of the fact that progress and prosperity are seen in every part of the South, and not simply, as he imagined, merely in Birmingham and Alabama. He was enthusiastic about what Birmingham and Alabama have been doing, but he did not know what other sections of the South were doing.

It is incumbent upon every man in the South who wants to be well informed as to the progress of the whole South to keep in touch with what is being done in West Virginia, in Texas and Oklahoma, and in all the intermediate territory, for in no other way can a man develop every latent possibility in his own business.

The moral is: Read the *MANUFACTURERS RECORD*.

TO IMPROVE RURAL CONDITIONS IN THE SOUTH.

With a view to encouraging the farmers of Forsyth county to improve and beautify their homes and surroundings the Board of Trade of Winston-Salem, N. C., which lies in Forsyth county, will offer cash prizes aggregating \$300 and to be divided on the following basis:

First—For the country home in Forsyth county which shows the greatest improvement by painting the house and improving the general outside conditions of the home.

Second—For the greatest improvement, including whitewashing or painting outbuildings about any rural home in Forsyth county.

Third—The best method of greatest improvement by carrying or piping water from the well or spring to the kitchen.

Fourth—For the home in Forsyth county which shows the most sanitary conditions about the house and well.

Fifth—For the home which has provided the most sanitary method for caring for and removing garbage and filth of all kinds.

Sixth—For the home which shows the greatest improvement in building or repairing and in whitewashing or painting the fences around the home, garden or barn.

Seventh—For the best-kept lawn.

Eighth—For the lawn which shows the greatest improvement by planting shrubbery or trees.

Ninth—For the home which shows the best general sanitary conditions about the entire premises.

Tenth—For the home which shows the greatest interior improvement by painting or papering, kalsomining or whitewashing the wall or painting the floor.

Eleventh—For the home that shows the greatest improvement in providing carpets, matting or rugs for the floors, the price of which shall not be taken into consideration in awarding the prizes.

Twelfth—To the home which shows the greatest improvement by decorating the walls with pictures, curtains or otherwise.

Thirteenth—To the home which shows the greatest improvement in new furniture.

Fourteenth—To the kitchen of any country home which is best equipped with labor-saving methods for the farmer's wife and family.

Fifteenth—To the country home which shows the greatest improvement in heating facilities in other rooms than the kitchen.

Sixteenth—For the country home which has the best heating and cooking facilities in the kitchen.

Seventeenth—For the home which shows the best method of caring for and disposing of slops from the kitchen.

Eighteenth—For the home which shows the cleanest and most sanitary hog-pen in Forsyth county.

These prizes are to be awarded only to farmers of the county, will not apply to residents of any city or town, and they will not take into account the question of the cost of improvements. The list of the features of the contest is published here in full because the MANUFACTURERS RECORD is convinced that the plan is one that can be adopted by the whole South to the immense advantage of every description with his family who is inspired by it to better his home environment and to every locality in which such an individual resides.

The practical purpose is to check the drift of young men and young women from country to town. Secretary J. S. Kuykendall of the Winston-Salem Board of Trade, in submitting this plan to the MANUFACTURERS RECORD in the hope that thereby other Southern communities may be led to enlarge upon it, argues very correctly that until the rural home is improved and beautified and brought up to such a standard as will compare favorably with the environments of the schools of this new era, and be more in harmony with the naturally developed tastes of young men and young women leaving educational institutions, such homes will not have the attractions that they should have and which the young people have a right to demand. The plan is in line with the movements for improved highways in the South, improved school-

DO YOU WANT

to know all about the South's material progress and its resources for future upbuilding?

DO YOU WANT

your children, your clerks, your friends and business associates to know how wonderful a land the South is, that they may the more intelligently understand this section? Certainly, if you are a man, you do.

DO YOU WANT

to know the real truth about the South and its resources as told by the ablest experts in America?

DO YOU WANT

to be able "to give a reason for the faith that is in you" about the South's future?

DO YOU WANT

to be able to form an intelligent opinion of how rapidly the South will advance in the future and the effect of this on country and city growth?

DO YOU WANT

"to show some friend from Missouri" that according to the testimony of the foremost authorities of this country, men of commanding position, whose judgment will be accepted in the financial and business world, the South is the most inviting field in this or any other country for the investor, the manufacturer, the farmer?

DO YOU WANT

to have in your office and in your library as well an "encyclopedia of the South," covering facts as they are covered nowhere else—facts which every intelligent man should know?

DO YOU WANT

to know about the past, the present and the future of the South?

On its thirtieth birthday, February 22, the Manufacturers Record will issue "Thirty Years of Southern Upbuilding." It will be the most comprehensive survey of the South and its varied activities, of its resources and its future ever published. Subscribers to the Manufacturers Record will receive a paper-bound copy of "Thirty Years of Southern Upbuilding" free. The price to others or for extra copies will be in paper cover, 50 cents; cloth binding, \$1.25; leather, \$2.

Many progressive business men and corporations have ordered a large number of copies in order to send them to correspondents in this country and abroad. Have you done so? If not, you had better send your order today.

houses and other public buildings in the country. The poverty of the past was a bar against such improvements in the majority of cases, but the period of poverty has passed, and the beginnings which have been made on the lines advocated by the Winston-Salem Board of Trade are reflected in the fact of an increase between 1900 and 1910 in the value of farm buildings in the South from \$855,103,000 to \$1,672,700,000, or by \$807,597,000, equal to nearly 94 per cent, and by the increase in expenditures for improved highways in the South from \$23,000,000 in 1904 to nearly \$46,000,000 in 1911, or at the rate of 99 per cent.

But great wealth is not needed to give effect to the improvements contemplated in the Forsyth county competition. A glance at the list shows that while some of the objects, like piping water to kitchen, interior decorations and furnishings, labor-saving appliances in the home and heating, require expenditures of money, others, like well-kept lawns, disposal of garbage, tree planting and sanitary hogpens, call principally for an expenditure of muscle power.

The Texas Industrial Congress, which brought about such splendid results as to crops by its \$10,000 in gold in prizes last year, has made a similar offer for 1912, emphasizing certain forage crops and demonstration of conservation, location and diversification on model farms. The Texas plan and

the Winston-Salem plan are complementary. For, making the most of the land, which is encouraged by the crop prizes, places the farmer in a position to make the most of his home and to add to it the little comforts and conveniences which count for so much in determining whether the boy and girl born on the farm will be content to end their days in happiness there.

PARCELS-POST SCHEME SHOULD BE DEFEATED.

Against the pertinacity and activity of a literary bureau at Washington attempting to develop a "popular" movement in favor of the scheme for a parcels post, the following is offered by some intelligent mind through the columns of the Montgomery Advertiser:

In recent years Congress has shown that it could do most anything, and would do nearly that much. Therefore, let us not be surprised if it does not take across its knee the middle man and the consumer, and give to a half dozen mail-order houses the largest, sweetest stick of candy in the box, which is to say that if the parcels post measure becomes a law at this session of Congress we need not feel surprised. At the same time the possibility of its passage at this session is greater than its probability. We still have confidence in the aggressiveness of those who have thought over this nefarious proposition long enough to appreciate its demerits.

It is always well to look twice at everything that glitters on the surface or at a distance. Do not be deceived by gorgeous glamour. That which promises most often yields less. There is no short cut to prosperity and mental comfort. We do not move

by leaps and bounds. If we accept a system which revolutionizes century-old customs and business notions on the plea that it means convenience and economy, we will pay for it. There is compensation for all things. Our blessings are never gratis—but that would indicate the concession that we regard the parcels-post system as a blessing, and such is not the case. It is a burglar in disguise, and we fear its friends, many of them, are deceived, while others are deliberately attempting to deceive the rest of us.

The money that Alabama and Oregon earns is theirs, in the sense that they should keep it at home instead of sending it to two or three cities for the necessities of life which they could buy of the home merchant who helps his neighbors to pay the expenses of the Government, signs good-roads petitions and helps to build schoolhouses and churches. Would the farmer aid in a scheme which would induce the consumer to order all of his eggs and produce from Canada when he could get it at home? Would the physician endorse a plan whereby his people should come to look to the quack doctors of distant cities for their physical ministrations? Should the Florida fisherman cast his vote and work his tongue for a plan which would make it to the interest of us all to eat Mediterranean sardines instead of red snappers? Certainly not. Then why should we welcome a scheme which as surely means the breaking of the middleman's back as the sun shines.

This fact should seem clear to any open mind. If the Government goes into partnership with a half dozen mail-order houses, agreeing to do the hauling for a part of the proceeds, where does your home merchant, who has done nothing to be condemned for, come in?

It is an undeniable fact that there are too many middlemen in this country; that is to say, individuals who do not produce, but live upon the real producers in exchange for services rendered. Many of these middlemen are public necessities and public conveniences. Some of them are in the nature of parasites, and are a drain upon the country. The elimination of the latter class of middlemen would be to the advantage of the country, but it would be a blow at the best interests of all should that elimination involve the destruction of the useful middlemen. The establishment of a parcels post would undoubtedly have that effect.

The main arguments advanced in its favor are that economy in the administration of the Postoffice Department would be induced, in that for the same amount of money the rural free delivery service could accomplish a great deal more work for the people; that rural communities would be able to buy their goods at lower prices, and that the power of the express companies would be checked. The answer to these arguments is simple. Economy in the administration of the Postoffice Department can be brought about, without increasing its power over the individual citizen, by applying better business principles to its administration. The prices of goods received by way of parcels post may be lower than those bought from the local merchant, but the cost of them to the public will be the same, if not greater, though the indirectness of it may conceal it among folks who do not realize that they are taxed unless they actually pay out the cash from their pockets into other's hands. There never has been a bargain-counter sale which has not meant increased profits in other directions for the dealer, not infrequently through the destruction of proper competition. If the express companies have abused their possession of a virtual monopoly in certain lines of transportation, the remedy lies in the destruction of the monopoly by due process of law, not in substituting a monopoly of mail-order houses for it.

Mr. H. Walters, chairman of the board, Atlantic Coast Line Railroad Co.,

In a letter to the MANUFACTURERS RECORD referring to the recent comprehensive article on Mr. Flagler's "Over-Sea" Railroad, says:

I have read your article with the greatest interest and am delighted that you have given proper praise to the man who was willing to undertake personally what should have been a national enterprise.

A WISE CHOICE.

The Chamber of Commerce of Birmingham has made a wise selection in choosing as president John W. Sibley. Mr. Sibley is one of the most active, progressive men of Birmingham, a leader in industrial operations, and the unanimous choice of the nominating committee in naming him is an indication of how his work in Birmingham is regarded. Mr. Sibley will make an active, broad-minded president. When men of his type are placed at the head of the business organizations of the South and their work heartily backed up by the community these organizations can be made very great factors in the material advancement of the South. Birmingham, and, for that matter, every city in the South that wants to really do things, needs this kind of co-operative or team work under the leadership of a man of broad business ability and untiring energy.

TEXAS CITY COMMERCE.

In 1904 the foreign and coastwise commerce at Texas City, Tex., aggregated 8712 tons, valued at \$998,428. In 1911, following the installation of modern improved facilities which have been brought about in the past few years, the commerce amounted to 444,695 tons, valued at \$61,524,263.15, of which 303,867 tons, valued at \$33,151,774.50, were coastwise, 144,402 tons, valued at \$28,009,723.65, were exports to foreign lands, and 1426 tons, valued at \$362,765, were imports from abroad.

FOR VIRGINIA FARMERS.

M. V. Richards, land and industrial agent of the Southern Railway Co., is circulating through Virginia a card calling especial attention to the agricultural train which his company will run in connection with the Virginia Department of Agriculture between January 29 and February 10, making 24 stops. On this train will be the new dairy instruction car just added to the educational facilities of the Southern Railway, in charge of Dr. C. M. Morgan, and on the train to assist in the demonstrations and lectures will be Commissioner of Agriculture G. W. Koerner and State Institute Director J. J. Owen of Virginia.

WISNER'S SUBSTANTIAL GIFT.

Edward Wisner, pioneer in the reclamation of wet lands in Louisiana, has given to the city of New Orleans for educational and charitable purposes 50,000 acres of wet lands. In announcing his gift Mr. Wisner called attention to the fact that these lands, situated within the New Orleans delta, are alluvial and reclaimable, and that he is convinced that the revenue from them will pay the cost of reclamation and provide for the beneficiaries he has selected. This conviction is justified by the wonderful results which Mr. Wisner has demonstrated can be obtained in reclamation.

THE COTTON MOVEMENT.

In his report for January 19 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight in 141 days of the present season was 10,645,665 bales, an increase over the same period last year of 1,479,278 bales. The exports were 6,280,008 bales, an increase of 1,200,613 bales. The takings were, by Northern



PERSPECTIVE OF TRINITY COLLEGE BUILDINGS, DURHAM.

Erected and to be erected; in foreground to left is academic building for large classrooms, and on right is administration building, containing offices, society halls, Y. M. C. A. quarters, etc.; the latter structure is replica of academic building on exterior, but different on interior; both completed and to be connected with colonnade, in center of which will be erected tower for clock and bell; directly in rear of two front buildings are east and west dormitories; east dormitory completed, and construction on west dormitory will begin about February 15; farther to rear are library building, auditorium, science hall, power plant and north dormitory; total expenditure for construction will be about \$250,000; architects, Hook & Rogers, Charlotte.

spinners, 1,259,540 bales, a decrease of 178,895; by Southern spinners, 1,258,901 bales, an increase of 110,959 bales.

World's Consumption of Bunker Coal

The suggestion that the opening of the Panama Canal may render feasible the establishment of a great American station for supplying coal from the mines of the United States to vessels of the world lends interest to an estimate prepared by the Bureau of Statistics, Department of Commerce and Labor, of the coal consumption on the oceans of the world. The statement estimates the coal consumed on the oceans of the world at approximately 75,000,000 tons per annum, valued at over \$250,000,000.

An exact statement of the quantity of coal consumed by the merchant marine and navies of the world cannot be made, owing to the fact that comparatively few countries state in separate terms the quantity of coal supplied to vessels for their own use or for "bunkering" purposes. The United States statistics show about 9,000,000 long tons supplied to vessels at ocean ports to be placed in their bunkers for their own use, and the British reports show about 20,000,000 long tons supplied to vessels in the foreign trade and 2,500,000 tons to vessels in the coastwise trade. This would make for the two great coal-producing countries of the world—the United States and the United Kingdom—a total of over 30,000,000 tons supplied directly to vessels for "bunkering" purposes. In addition to this, however, a very considerable percentage of the coal sent out of Great Britain as "exports" passes to ports and stations in various parts of the world from which it is finally supplied to ocean vessels for fuel purposes. A paper presented before the Royal Statistical Society of England by D. A. Thomas, M. P., stated that:

"The great bulk of our export of coal is for use of steamships, and it is within the mark to say that over half of our exports are for navigation purposes. * * * Cardiff alone ships over 1,000,000 tons annually to Port Said, over 500,000 to Malta and Gibraltar, about the same quantity to Cape Verde and the Canaries, over 300,000 to Colombo, and large quantities to Aden, practically the whole of which goes to bunker steam vessels calling to coal at those depots."

As the British exports of coal, aside

from that recorded as supplied to vessels for fueling purposes amounted in 1910 to over 62,000,000 long tons, the above quoted estimate would seem to justify adding to the 30,000,000 tons recorded as bunker coal by the United Kingdom and the United States another 30,000,000 as the share of British exports which finally become bunker coal through purchase for bunkering purposes at ports or stations to which it was originally exported. While the Bureau of Statistics is unable to state the share of American coal exports which become vessel supplies (aside from that actually reported as bunker coal and not included in the export statement), it is quite probable that a considerable percentage of the coal from the United States which passes to the West Indian Islands and the coast of Mexico is used for vessel fueling. Add to this the more than 2,000,000 tons supplied by the Japanese mines to vessels engaged in the foreign trade, the more than 1,000,000 tons supplied from Australia, the nearly 1,000,000 tons supplied from India, plus the estimated consumption of about 3,000,000 tons by the navies of the world, and the Bureau of Statistics estimate of an average of 75,000,000 tons consumed on the oceans of the world seems a conservative one. As the valuation of the coal exported for steaming purposes averages about \$3.50 per ton, the further estimate of the value of the coal used on the oceans of the world—over \$250,000,000 per annum—seems also a conservative one.

The United States is by far the largest coal producer of the world, its production in 1910 being 441,500,000 metric tons, against 264,500,000 by the United Kingdom, 222,000,000 by Germany, 39,000,000 each by France and Austria-Hungary, 24,500,000 by Russia, 23,000,000 by Belgium, 15,000,000 by Japan, 14,500,000 by China, 13,000,000 by Canada and 12,000,000 each by Australia and India, the grand total of production in 1910 for all countries for which statistics are available being a little over 1,000,000,000 tons, of which about 40 per cent. is produced by the United States, about 23 per cent. by the United Kingdom and about 20 per cent. by Germany.

The coal beds of the United States contain large quantities of coal especially suited to steamship use by reason of steaming qualities, freedom from danger of spontaneous combustion and proximity to the seaboard.

Southern Cotton Machinery in India.

One of the many instances showing to what extent machinery built in the South is shipped throughout the world is seen in a statement credited to S. I. Monger, Jr., of Dallas, Tex. Mr. Monger is quoted by the Nashville *Tennessean* as follows:

"I have recently been in India installing cotton machinery of all kinds, and as it is the second cotton country in the world, being next to the United States, the up-to-date cotton raisers are getting wise to the benefits of up-to-date machinery. India produces 500,000 bales a year.

"Russia is a progressive cotton country, and the citizens of that country have increased the production very rapidly in the past few years. Russia, India, China and Asiatic Turkey are countries to which the American machines are most adaptable. The United States is exporting cotton very largely to Russia."

Will Develop Georgia Lands.

Referring to his company's plans, Geo. C. Walters of the Georgia Interstate Development Co., Atlanta, wires the MANUFACTURERS RECORD as follows:

"Georgia Interstate Development Co. proposes to develop and sell farm lands and town property. The incorporators have acquired a tract of very fine agricultural land in the heart of the Sea Island cotton belt in Southeast Georgia, and this will be first developed. Capital is \$25,000, with authority to increase to \$500,000. New York and Georgia people are interested. Frank Weldon, 'and expert, of Atlanta, will be president. The land selected is the very finest type in the State. Canning factories for packing sweet potatoes and other vegetables and Georgia cane syrup will be established."

This company's incorporators are Messrs. Walters and Weldon, Stanley Woodward, Maurice I. Pitou and F. P. Ball of New York.

Fort Worth's Paved Streets.

A report of the city engineering department of Fort Worth shows that the city has 40.55 miles of paved streets, valued at approximately \$1,876,000. To this amount will soon be added \$300,000 and 15 miles of streets, contracts for these having been awarded. The present mileage is divided as follows: Over 18 miles of bitulithic; nearly 3 miles of vitrified brick; nearly 7 miles of sheet asphalt; over 4 miles of rock asphalt; over 2 miles of mineral rubber. The paving contracted for comprises over 7 miles of bitulithic; over 4 miles of sheet asphalt; nearly 2 miles of vitrified brick; nearly 1 mile of asphalt macadam, and about one-half mile of vibrolithic.

To Drain 9000 Acres.

Johnson and Henry counties, Missouri, will drain 9000 acres at a cost of \$94,000. This work will require the construction of a main drainage ditch 30 miles long, 30 to 50 feet wide and 12 to 17 feet deep, and about 30 lateral ditches from 10 to 25 feet wide and 3 to 12 feet deep. R. H. and G. A. McWilliams of Chicago have contract to excavate 700,000 cubic yards of earth for the main ditch, and Johnston & Young of Blairtown, Mo., have contract to excavate the lateral ditches. This improvement will reclaim land subject to the overflow of Big Creek. Brooks & Jacoby of Kansas City are the engineers in charge.

Manganese Dioxide and Asbestos.

L. H. Krieter, 509 Chamber of Commerce, Chicago, writes to the MANUFACTURERS RECORD that he is in the market for manganese dioxide and crude asbestos.

January 25, 1912.]

"Over-Sea" Railroad Welcomed by Key West.

[Special Dispatch to Manufacturers Record.]

Key West, Fla., January 23.

The "Over-Sea" Railway is an accomplished fact, and Key West is now connected with the Florida mainland by those bands of steel that form the most lasting attachments known to modern life. Through train schedules between this island and the principal commercial points throughout the United States have been established. Mail contracts that have heretofore called for carrying the country's letters to Knights Key by train and thence into Key West by boat have been shifted over to the all-rail route, and the bags are now brought over the entire distance in railway mail coaches. The traveler can step into a Pullman car at the New York station and step out in Key West without having made a change in the meantime. Freight of all kinds can now be carried to and fro between Key West and the centers of commerce and population of the country in unbroken bulk with locomotive speed. The dream cherished for years by Henry M. Flagler has been visualized, and now the world can see in concrete form the child of his active brain.

The great tract of land pumped up from the sea for the accommodation of the Florida East Coast Railway terminals, and known as Trumbo Island, was the scene yesterday of one of the most inspiring panoramas ever presented by human actors in actual life, when practically the entire population of Key West swarmed over it to hail the arrival of the first through passenger train bearing the man whose genius and courage and faith in this country's future brought the "Over-Sea" Railway into being. Bands played, guns boomed, whistles screamed, people shouted and clapped their hands. A great body of children had been trained to sing in chorus, and their happy voices rang in joyous notes a royal welcome to the new era marked by the arrival of that train, the significance of which and its bearing on their lives and opportunities the minds of the little singers could not possibly grasp.

The first train was followed by others, each bearing hundreds of passengers, until seven had emptied their cargoes of humanity in the city, adding thousands to streets and houses already crowded.

With the arrival of train the big celebration for which Key West has been preparing for weeks began, and the city has been in a whirl of excitement ever since, and will continue until Saturday of next week. There has been speaking, marching, banqueting, dancing and all kinds of social functions, the chief being a banquet in Mr. Flagler's honor tonight. The largest delegation of Congressmen that ever left Washington on a single mission is here to look into the desires and desires of the city in the matter of military post, the naval station and the dredging of the harbors. The members of the various committees seemed much impressed, and increased appropriations are expected to result.

The Governor of Florida is here with his staff. A number of foreign countries have sent representatives, and some sent warships.

These things are regarded as having a deeper meaning than could be gathered from mere social forms and customs. They are taken to mean that the importance of the new Key West is generally recognized by the thinking people and as having an important bearing upon the city's future. The business men here, while overlooking

no point of their duty as hosts, are earnestly presenting the advantages and opportunities and seeking to make friends of a substantial kind, and their arguments are undoubtedly having effect. Meantime Mr. Flagler stands the central figure around which this big celebration revolves. The heartfelt gratitude of the people is borne to him from every side, and he has expressed himself as deeply touched by the expressions of this gratitude and esteem and is participating in as many of the entertainments as his strength will allow. He attended the banquet tonight and gave every evidence of pleasure and satisfaction over the speeches that foretold the greatness of Key West.

GEO. BYRNE.

BIRMINGHAM IRON MARKET.

Inquiries Involving Liberal Tonnage for Early Delivery.

[Special Cor. Manufacturers Record.]
Birmingham, Ala., January 23.

A fair volume of business was transacted in the pig-iron market during the past week, and so far in the present week inquiries received involve a very liberal tonnage for comparatively early delivery. The requirement of a large pipe manufacturer is the most important consideration before the selling interests just at this time, but interest on the part of the smaller melters is not lacking. In this connection it is well to note that reports from all quarters of the territory indicate a normal rate of operation among the smaller foundries, and that shipments to that class of trade are considerably larger than for some months past. While a resale feature was connected more or less with the most important transactions of the past week, the furnace companies were relieved of considerable tonnage that has been held in warrant yards, and the fact that the merchant interests were disposed to buy against future sales has had a very decided tendency to strengthen the market generally. It is understood that during the week a leading producer disposed of some 10,000 tons under warrant; a smaller interest sold 3000 tons, and report has just been made of the sale of 1700 tons by still another interest. The price at which this tonnage was sold, of course, varies, owing to the nature of the several transactions, and to the fact that the merchant interests were the largest buyers. The sale of 500 tons of No. 2 soft iron to a Southern melter has just been reported at \$10.25 per ton at Birmingham. Such figures are being adhered to by at least two producers, with \$10.50 per ton for No. 2 foundry the minimum price quoted by another. There is, however, some tonnage to be had at a basis of \$10 per ton Birmingham for No. 2 foundry, but without the regular differential of 50 cents per ton for the low grades. The demand for low grades, i. e., for No. 4 foundry, gray forge and mottled, continues very strong, and those concerns which have such tonnage to offer generally ask a premium of 25 to 50 cents per ton. In no case is a price being made on deliveries after July 1, and a small producing interest quotes on all grades for the first quarter only.

Additional tonnage of charcoal iron is pending, with prices being fully maintained. In certain directions it is probable that a smaller tonnage of this last named is being consumed, owing to the substitution of steel wheels for cast-iron wheels, but the demand from the roll-

making trade gradually increases, and the furnaces in operation are supplied with orders to a greater extent than the furnaces being operated on coke. The local market for basic has been quiet, comparatively, for some weeks, but prices are about the same. We continue to quote all grades for delivery in the first half of this year as follows per gross ton f. o. b. cars here, viz.: No. 1 foundry, \$10.50; No. 2 foundry, \$10; No. 3 foundry, \$9.50; No. 4 foundry, \$9.25; gray forge, \$9; standard basic, \$10; standard charcoal iron, \$22.50.

In addition to the tonnage of cast-iron water pipe mentioned in last report for early letting, the city of Spokane, Wash., is soon to enter the market for some 7500 tons for prompt delivery. There is also several lots of from 1000 to 1500 tons for Southern cities to be provided within the next 60 to 90 days. Replacement and extension requirements have been fairly attractive within the past few weeks, and with more favorable weather conditions the actual movement from producing plants has increased very materially. Preparations are now under way for the rehabilitation of the former Dimmick Pipe Co. plant at North Birmingham, and it is understood that operations will be resumed by the United States Company about May 1. So far as can be ascertained, quotations have not been changed, but owing to the large tonnages recently placed with Eastern plants it is probable that competition in the Central West is not so keen, and that higher averages can now be had. We continue to quote class "B," or water pipe, as follows per net ton f. o. b. cars here: 4-inch to 6-inch, \$23; 8-inch to 12-inch, \$22; over 12-inch, average \$21, with \$1 per ton extra for class "A," or gas pipe. For this last there is considerable demand to meet requirement in railroad construction, and additional tonnage for that purpose is soon to come up.

In the coke market Alabama producers have recently disposed of very attractive tonnages to smelters in the West and Southwest, and are now considering tonnage for requirement at sugar refineries on the Pacific Coast. There is also an attractive tonnage under consideration in the shape of annual requirements at water-gas plants and the usual contracts for foundries. It is not believed that any contracts will be entered at lower figures for this year than obtained during the year just ended, but local concerns are still confronted with freight disadvantages to the same extent as formerly. Practically all of the commercial ovens in this district are in blast, and notwithstanding the rate of production there is now a marked shortage of the best foundry grades, owing to the delay in shipments from the Virginia and West Virginia fields since January 1. Of course, with the large percentage of idle blast-furnace capacity the production of foundry coke is small comparatively, but prices, even for that grade, are being held very firmly. Prices for steam coal are very firm and the output has increased materially since last report. More or less complaint is still made of the shortage of equipment for the movement, but the situation as a whole is fairly satisfactory. The season for domestic coal is considered practically over, and within a very short time revised prices will become effective.

In the finished materials report is made on an addition of some 5000 tons of steel rails to the order-book requirement at the Ensley (Ala.) plant, and a very satisfactory volume of shapes is being placed. All of the small mills continue in operation and prices received are fairly satisfactory in the majority of cases. There has been some recent trading in light rails, and

several inquiries are now before sellers. Prices have not changed, however, and are quoted at \$1.35 per hundredweight for 12 to 40-pound sections, with eight-pound sections bringing \$1.60 per hundredweight in l. c. l. lots.

Conditions existing in the old-material market are rather unusual, and values can hardly be arrived at with accuracy. The accumulation of all grades on local yards is very small comparatively; consequently prices being quoted depend very largely upon the ability of dealers to secure such tonnage as is required. This is particularly true of the wrought and steel grades, also of machinery cast and heavy melting scrap. There is practically no demand for country grades, while old rails and axles are moving in small quantities only. We consider the market as fairly strong, but quote nominal asking prices. The prices ruling are about as follows per gross ton f. o. b. cars here:

No. 1 railroad wrought, \$11.50 to \$12.
No. 2 railroad wrought, \$8 to \$8.50.
No. 1 country, \$7 to \$7.50.
No. 2 country, \$6.50 to \$7.
No. 1 machinery, \$8.50 to \$9.
Standard car wheels, \$11 to \$11.50.
Tram car wheels, \$8 to \$8.50.
Light cast and stove plates, \$7 to \$7.50.
Old iron rails, \$13 to \$14.

Within the past week the only furnace in operation at the Vanderbilt (Ala.) plant of the Birmingham Coal & Iron Co. was blown out, affecting, of course, the operations of that concern at all ore and coal properties. The stock of pig-iron and of raw material has been practically cleaned up at the plant in question preparatory to the taking over of the properties by the Woodward Iron Co. on February 1. It is not known just what policy will be followed by the Woodward company as to the operation of the Vanderbilt furnaces, but that concern has recently added materially to its transportation facilities, having acquired, as has been previously mentioned, certain trackage rights over the Atlanta, Birmingham & Atlantic Railroad with the purchase of the Birmingham Coal & Iron Co.

Incident to the finished-material market, it is interesting to note that within the past week the Tennessee Coal, Iron & Railroad Co. forwarded from its Ensley (Ala.) plant a shipment of from 1500 to 2000 tons of standard steel rails for use at Kobe, Japan. This was the initial shipment against an order for some 3500 tons and moved through Savannah, Ga.

SOUTHERN OIL PRODUCTION.

Preliminary Figures of Developments Last Year.

Considerable activity in oil drilling and prospecting throughout most of the Appalachian oil field in 1911 is reported by David T. Day of the United States Geological Survey, notwithstanding the fact that the decline in production in the older pools was slightly greater in 1911 than in 1910. For 1910 the final figures of production as compiled by the Geological Survey were 31,985,515 barrels, while Dr. Day's estimate for 1911 is 28,000,000 barrels. In Pennsylvania there were several interesting instances of unusual production within old territory. In the Bristeria field, in Greene county, a well came in early in the year at over 300 barrels a day, and though gradually declining was still yielding 60 barrels or more at the end of 1911. At Perryville, in Allegheny county, the Schwarz well began with over 100 barrels and maintained an unusually good yield for the entire year.

In West Virginia Roane, Ritchie and Wetzel counties were most active in new drilling, but no sensational wells were developed. The production in Harrison

county and elsewhere was successfully stimulated by a liberal use of nitroglycerin.

In Southwestern Ohio operations were very active. In Hocking, Fairfield and Perry counties there was considerable local extension of the pools. As partly offsetting the rapid decline in Northwestern Ohio, two 30-barrel wells were drilled in Hardin county. A 25-barrel wild-cat was brought in two miles outside of productive territory in Ottawa county.

Drilling was more active than usual in Kentucky during the entire year, especially in Wayne county, where two new pools of considerable size were developed. The Joseph Hurt No. 16 well in the Mt. Pisgah pool, which gave an initial production of about 500 barrels a day, and the splendid results in the Griffin field greatly stimulated drilling toward the end of the year. Contracts were let for considerable drilling along Little South Fork of Cumberland River, and the interest in prospecting in Eastern Kentucky continued throughout the year. In Tennessee some leases were made and prospecting for oil was assured for 1912. In Indiana there was little activity, even in the Oakland City district, although some good gas wells and a 10-barrel oil well were brought in south of Vincennes, Knox county.

The most interesting event in Illinois during the year was the discovery of oil by F. B. Ranger and the Surpass Oil & Gas Co. on the Maria Smith and Peter Murphy farms near Carlyle. This district had been pointed out by the Illinois State Geological Survey as promising for an oil field. Great excitement attended the discovery, and unreasonable prices were paid for leases several miles away from the producing wells. During the year many test holes were sunk, practically all of those within a mile or two of the original wells yielding oil and all those at a greater distance being dry. The heaviest producer was Murphy No. 5, which yielded at the start 2000 barrels of oil per day. At the end of the year the production of the Carlyle pool was about 5000 barrels per day. Oil and considerable gas were found near Carlinville late in the year, but developments were not sufficient to promise a large pool.

At least 56,000,000 barrels of oil produced in the Kansas-Oklahoma oil field in 1911 is the estimate of Dr. Day, against an output of 53,157,387 barrels in 1910. In the Barnsdell and Sinclair pools, in Osage county, Oklahoma, wells of 1000 to 3000 barrels daily yield were brought in with sufficient frequency during the year to keep the production of the pool in the neighborhood of 20,000 barrels a day, with a gradual decline toward the end of the year. This new production, together with the increase in the Hogshooter and Pawnee county pools, pushed the output beyond the record in 1910, in spite of the great drought in June and July, which was so severe as to drain the drinking supply of several towns and interfere greatly not only with drilling, but with manufacturing enterprises. Several times during the year stocks were drawn upon to a slight extent, and increased prices for the oil resulted. Transportation facilities were increased by an 18-inch line built by the Prairie Oil & Gas Co. from Turley west 20 miles to Osage Junction. Another 18-inch line was built by the same company from Osage Junction to Cherokee, 30 miles to the northeast. The Texas and Gulf companies also ran lines connecting the Osage pools.

The oil industry of Texas made some gains in 1911, or at least held its own with the 1910 production. The Survey figures for 1910 are 8,890,266 barrels, and the estimate for the 1911 production is 9,000,000 barrels.

Oil prospecting was active in almost

every part of the State, the effort being to exploit every well-known sign of oil. Exploitation was in progress in Reeves, Shackelford, Midland, Caldwell, Nacogdoches, Trinity, Duval, McMullen, Webb, Starr, Chambers, Uvalde, Rusk, Jasper, Stonewall, Kaufman, Pecos, Wood, Orange, Wilbarger, Wichita, Clay, Montague, Hardin, Hardeman and Marion counties and in many other regions.

On January 17 the Producers' Oil Co. drilled in its No. 5 Waggoner tract, about two miles north of the town of Electra, Wichita county. This was the second producer, and yielded 50,000 barrels a day at a depth of 1825 feet. From this time drilling was extremely active, particularly by the Producers' Oil Co., the Clay County Company, the Magnolia Company and others. Oil had first been discovered in this region by Mr. Waggoner in drilling for water. In fact, oil in small quantities was an inconvenience in most of the water wells of this neighborhood. The oil is found in sands from 10 to 30 feet thick, principally at 580, 965, 1035 and about 1900 feet. The wells yield from 50 to 1200 barrels by natural flow. Natural-gas pressures are light as compared with those in the Petrolia and Henrietta pools, 40 miles to the east. In September the field was credited with a production of 6000 barrels a day, and in October a contract was let for a pipe line from Electra to Dallas, a distance of 160 miles.

The Electra, Petrolia and Henrietta fields are located in the great belt of Permian "Red Beds" in Northern Texas, which are included in a great grazing country as yet but little explored for oil. Doubtless other pools will be found in this belt, the local structure of which, on account of the peculiar stratigraphic conditions, will probably be determined only with difficulty.

In November Corsicana well No. 11 yielded 1200 barrels a day initial production, and the total for the field was 9000 barrels a day. The increase by November 13 amounted to over 12,000 barrels, an average of over 350 barrels to the well. The wells proved to have good staying properties. At the end of the year two pipe lines were proposed for the field, one to be built by the Texas Company to Dallas and the other by the Pierce-Fordyce Association to its refineries at Fort Worth. Both of these lines will also ultimately be connected with the refineries at Port Arthur. The oil is of light gravity, and shows by analysis made in the Geological Survey the following results: Gravity, 41 degrees B.; gasoline, 19 per cent.; kerosene, 35 per cent.; paraffin wax, 3.2 per cent. The unsaturated hydrocarbons amount to 4 per cent.

Louisiana's production of petroleum in 1911 increased by more than 3,000,000 barrels over the production for the previous year, according to David T. Day of the United States Geological Survey. The Survey's figures for 1910 are 6,841,395 barrels, and Dr. Day's estimate for 1911 is 10,000,000 barrels.

At the end of 1910 the erratic Caddo field was producing 22,000 barrels a day. The production declined to 14,000 barrels in January, 1911, and for the rest of the year it varied between 13,000 and 35,000 barrels, as the advent of one large well after another affected the output, each settling down after a short period to a moderate yield. The most remarkable gusher was reported in April as producing 17,000 barrels of oil with 14,000 barrels of water at 112 degrees F.

The sensation of the Gulf field was the development of the Vinton area, in Southwestern Louisiana. At the beginning of the year the Gulf Refining Co.'s Gardner-Noble well came in at 7200 barrels of pure oil, increasing the yield of the pool three-

fold. Another gusher in February yielded 13,000 barrels a day. Late in February the Producers' Oil Co. No. 2, Gray tract, came in with 2000 barrels, making a total production of 20,000 barrels a day at the end of February. In the middle of March two gushers, one at 5000 and the other at 4000 barrels, further added to the production, while a well yielding 6000 to 10,000 barrels a day extended the field half a mile to the west. By the end of the year the new wells were much less productive, and the total yield of the field markedly declined.

Hardwood Manufacturers.

The tenth annual convention of the Hardwood Manufacturers' Association of the United States will be held at Cincinnati, O., next week. The organization of the association is as follows:

Executive Board—President, W. B. Townsend, Townsend, Tenn.; first vice-president, W. E. De Laney, Cincinnati, O.; second vice-president, C. L. Ritter, Huntington, W. Va.; treasurer, C. M. Crawford, Coal Grove, O.; R. M. Carrier, Sardis, Miss.; Clinton Crane, Cincinnati, O.; W. A. Gilchrist, Memphis, Tenn.; Frank F. Fee, Dermott, Ark.; J. H. Himmelberger, Cape Girardeau, Mo.; C. R. Lamb, Minneapolis, Minn.; John W. Love, New York city; G. E. W. Luehrmann, St. Louis, Mo.; J. W. Oakford, Scranton, Pa.; A. B. Ransom, Nashville, Tenn.; W. M. Ritter, Columbus, O.; R. H. Vansant, Ashland, Ky., and Wm. Wilms, Chicago, Ill.

Executive Grading Commission—R. H. Vansant, Ashland, Ky.; R. G. Page, South Bend, Ind.; G. E. W. Luehrmann, St. Louis, Mo.; E. A. Lang, Chicago, Ill.; John W. Love, Nashville, Tenn.; C. M. Crawford, Coal Grove, O.; F. A. Kirby, Scranton, Pa.; W. H. Dawkins, Ashland, Ky.; J. H. Himmelberger, Morehouse, Mo.; Frank F. Fee, Dermott, Ark.; W. E. De Laney, Cincinnati, O.; W. M. Ritter, Columbus, O.; R. M. Carrier, Sardis, Miss.; W. A. Gilchrist, Memphis, Tenn., and B. B. Burns, Huntington, W. Va.

State Vice-Presidents—Alabama, F. W. Webster, Decatur; Arkansas, D. P. Mann, Marked Tree; District of Columbia, John T. Flourney, Washington; Georgia, W. H. Shippen, Ellijay; Illinois, William Moore, Hoopston; Indiana, C. H. Kramer, Richmond; Kentucky, Floyd Day, Clay City; Iowa, Elmer W. Harris, Cedar Falls; Louisiana, E. B. Schwing, Plaquemine; Massachusetts, W. E. Litchfield, Boston; Mississippi, W. B. Burke, Charleston; Missouri, J. H. Friant, Morehouse; North Carolina, William Whiting, Asheville; Ohio, Wm. I. Barr, Greenfield; Pennsylvania, F. R. Whiting, Philadelphia; South Carolina, N. W. Gennett, Franklin, N. C.; Tennessee, S. Lieberman, Nashville; Texas, A. Deutsch, Flanagan; Virginia, A. Johnston, Pennington Gap; West Virginia, George E. Brece, Charleston, and Oklahoma, D. A. Anderson, Redland.

The State directors are:

Arkansas—One year, F. E. Gary, Turrell; two years, A. C. Ramsey, Nashville; L. D. Gilbert, Texarkana, and J. F. McIntyre, Pine Bluff.

Georgia—Two years, G. W. Beebe, Clayton.

Illinois—One year, E. A. Long, Chicago; two years, E. T. Scott, Metropolis, and P. Ford, Chicago.

Indiana—One year, Daniel Wertz, Evansville; two years, G. O. Worland, Evansville.

Iowa—Two years, Elmer W. Harris, Cedar Falls.

Kentucky—One year, E. W. Pratt, Jr., Crofton; two years, W. H. Dawkins, Ashland, and W. T. Culver, Ludington, Mich.

Louisiana—One year, J. S. Otis, New

Orleans; two years, J. Gudenrath, Meade, Massachusetts—Two years, F. W. Lawrence, Boston.

Mississippi—One year, J. L. Strickland, Greenville; two years, W. J. Cude, Nashville, Tenn.

Missouri—One year, W. W. Dings, St. Louis; two years, W. P. Anderson, Gideon, and Thos. E. Powe, St. Louis.

North Carolina—One year, G. N. Hutton, Hickory, and W. N. Cooper, Asheville.

Ohio—One year, W. H. Nigh, Ironton; two years, H. C. Hossfous, Dayton.

Pennsylvania—One year, F. A. Kirby, Scranton; two years, I. F. Balsley, Pittsburgh.

South Carolina—One year, Andrew Gennett, Franklin, N. C.

Tennessee—One year, M. F. Greene, Nashville, and Robert Vestal, Knoxville; two years, A. J. Gahagan, Chattanooga.

Virginia—One year, Rolfe Gerhart, Charlestown, W. Va.; two years, M. N. Offut, Bristol.

West Virginia—One year, E. L. Davidson, Parkersburg; two years, W. L. Watson, Mahan.

Work for Montgomery.

Business Men's League,
Montgomery, Ala., January 20.

Editor Manufacturers Record:

The Business Men's League at its annual meeting elected Emil J. Meyer, president; Jacques Loeb, M. P. Le Grand and J. C. Haas, vice-presidents, and B. J. Weil, Hartwell Douglass, F. G. Salter, W. E. Pitts, L. B. Whitfield, R. D. Quisenberry, Sam Kaufman, Emanuel Meertief, J. S. Pinckard, H. M. Hobbie, Stewart McQueen, C. T. Tullis, F. J. Cramton and Henry Bartlett, directors.

A farm department is maintained under the direction of the committee on agriculture, and during the year the League supported a freight bureau and a rebate department, the latter being engaged in refunding fares to out-of-town customers and otherwise extending and fostering the retail trade. Montgomery is largely dependent on agriculture, and the work in this direction naturally came first. An active farm agent is employed, whose duty it is to demonstrate diversified crops to the farmers.

The organization influenced two railroads to build to Montgomery, and with its co-operation they are now in construction. These are the Montgomery & Chattanooga Railroad Co. and the Valdosta & Moultrie Railroad Co. Committees were important factors in securing both mail, freight and express facilities for Montgomery, and they cultivated the most cordial relations with our public utility corporations.

A special committee of the League did a vast amount of work last year in securing data and in paying the way for the organization of a packing-house company in Montgomery. The committee has been renewed, and is hopeful that success will meet its efforts during this year.

Last year the League secured and entertained 14 large conventions.

BRUCE KENNEDY, Secretary.

To Grow Corn on 12,000 Acres.

The Fountain Farm Co. plans to drain and cultivate 12,000 acres of land in Camden and Currituck counties, North Carolina. Engineers have completed surveys for drainage, and a system of canals will be cut. C. E. Sims of Norfolk and local farmers are organizing a drainage district to cut the main outlets for the ditches, and contemplate beginning work by April. They will organize the company with a capital stock of \$250,000, and contemplate cultivating corn on the 12,000 acres.

BLEWITT'S FALLS DAM CLOSED.**Progress on the Carolina Power & Light Co. Project.**

[Special Cor. Manufacturers Record.]

Raleigh, N. C., January 22.

At Blewitt's Falls, on the lower Yadkin River, where the greatest of the power plants of the Carolina Power & Light Co. is, the 10 gates closing the 10 sluiceways in the great dam were released and fell into their places, and for the first time the river ceased to flow below the dam. The gates are of massive pine timber, and the openings in their rear will be filled with concrete, thus closing the dam forever. On Sunday water rose and ran over the great dam, which is over 50 feet high and 1650 feet in length between the abutments. The back water reaches between 30 and 40 miles. The company has bought all the land which is thus overflowed, this lying in four counties. It will put on in the spring a boat line between Blewitt's Falls and the upper river to handle both freight and passengers.

Saturday the Raleigh substation of the Carolina Power & Light Co. began sending current, 23,000 volts, to the Buckhorn power-house in order to dry the transformers, and this current will be continued for several days so as to have everything ready for the turning on of the 100,000 volts from the Buckhorn plant on February 1. Everything will be ready for this. All the machinery in the various plants operated by this company have been tested up to 60,000 volts, which will be the power sent out from the central substation in the suburbs of Raleigh, to which the 100,000 volts from the Blewitt's Falls plants will come for general distribution, and Durham will be supplied with current on the date named. It is already being supplied to Henderson and intermediate points by the power line from the Raleigh substation. There has not been a hitch in any of the arrangements, and the stockholders are greatly pleased with the entire success of all their plans, the carrying out of which has cost millions of dollars.

FRED A. OLDS.

EGYPTIAN COTTON IN TEXAS.**Demonstration of Soil and Climatic Capabilities.**

[Special Cor. Manufacturers Record.]

Buenavista, Tex., January 15.

The superior qualities of Egyptian cotton, its luster, beauty of staple, great length and strength of fiber has led to various planting in Arizona, California and Texas.

The best Egyptian cottons, bringing a price second only to that paid for the highest grades of Sea Island, being used solely in the manufacture of the finest goods, make a very strong inducement toward its production wherever the soil and climate are suitable, which is the condition in but a comparatively small portion of the United States, as it requires a rather longer season to mature than ordinary cottons.

On the 18th of May last a small plot was planted on the demonstration farm of the Imperial Irrigation Co. at Buenavista, Tex., on which a perfect stand was secured. It was grown and cared for during the season under usual farm conditions, simply good clean culture, in order to make the test as severe as possible and a thoroughly practical cue. The plants made an even and vigorous growth, reaching a height of about twice that of Rowden Big Boll and other varieties in adjoining fields.

The foliage was very luxuriant, and it blossomed freely, putting on from 40 to 80 bolls on each plant. It grew freely all summer, reaching a height of from four and a half to a little over five feet, never

exhibiting the check or complete stoppage of growth that other cottons sometimes do when they have a certain amount of fruit on. It was not possible to note any distinction between the bottom and top crop. Its entire habit and appearance commanded much favorable comment from experienced cotton growers. It was easily picked clean, and the yield of about three-fourths of a bale to the acre would have doubtless been largely increased by a little earlier planting.

The area in which the best long-staple cottons can be grown is so small. Egypt and a small portion of this country being practically the only localities where these varieties are grown, would seem to indicate strongly that the best prospect of building up a profitable and lasting cotton industry in these irrigated districts, that have the Egypt-like climate, is in growing the best Mit Afifi or Jannovitch seed.

The mean temperature of the Pecos Valley and that of Cairo, Egypt, do not differ materially, thus giving us a season long enough to mature a good crop, while practical tests show the soil and irrigation water resemble those of its native habitat sufficiently for excellent results.

Like the Delta of the Nile, these soils are of alluvial origin, formed when the valley carried a vastly greater flow of water than the present discharge of the Pecos, and have a depth which no ordinary plant will penetrate, insuring lasting substance and fertility.

In the markets these cottons bring about double the price for common grades, and there are said to be "four principal reasons for the extensive use of Egyptian cottons in the United States:

(1) They are best adapted to mercerizing and other processes that give a high finish to the cloth and cause it to resemble silk.

(2) Their exceptional cleanness (freedom from nap) and luster, as well as their capacity for taking dyes, fit them for mixing with silk and for filling satens, India linens and similar goods having a brilliant surface.

(3) The brown color of Mit Afifi fiber allows it to be used without dyeing in manufacturing goods such as Balbriggan underwear and lace curtains, in which the ecru shade is desired.

(4) They can be used for the manufacture of sewing thread and other articles which need to be very strong and for which no other type of cotton but Sea Island is suitable.

WILLARD H. DENIS.

IN SPITE OF BOLL-WEEVIL.**Results in Cotton Growing in the Louisiana Delta.**

Editor Manufacturers Record:

Mason Snowden, supervisor of farm demonstration work in Louisiana, is getting in reports from his district agents, and we furnish you a condensed report on cotton production by Agent L. M. Calhoun, whose field covers the Delta parishes, where a few years ago it was thought that cotton production could not again prove profitable.

West Feliciana parish reports three demonstration farms, aggregating 68 acres, with an average yield of 698 pounds seed cotton per acre. The report says: "The season was wet and the bugs were bad."

Onachita parish reports four farms, aggregating 105 acres, with an average yield of 1201 pounds seed cotton per acre.

Catahoula parish reports two farms, aggregating 485 acres, with an average yield of 1313 pounds seed cotton per acre.

Tensas parish reports one farm of 100 acres, with an average yield of 1155 pounds per acre.

Franklin parish reports as follows:

Thirty farms, aggregating 2000 acres, with an average yield of seed cotton of 1257 pounds per acre; also one farm, 460 acres, 380 bales of 535 pounds average, with 40 bales unpicked on January 1; also one farm, 1250 acres, yield 1011 bales of 525 pounds average; also one farm worked by three mules, yield 450 bushels corn, 46 bales cotton, with plenty of boll-weevils for 1912; also three acres fancy staple, yield two bales, average 565 pounds, and seed at 20 cents per pound f. o. b.; also 11 acres long staple, yield in seed cotton 1008 pounds per acre, packed in six bales, average 528 pounds and sold at 15 cents f. o. b.

The foregoing official reports show that both short and long-staple cotton can be grown on the Delta lands south of Memphis with boll-weevil infestation when reduced acreage and cultural methods are adopted. The boll-weevil always gets the "top crop," and we have an average of about 1200 pounds seed cotton per acre; that is doubtless a larger yield than before the boll-weevil came.

If all the cotton acreage in the South in 1911 had been cultivated as were the above crops, we would have a total crop of 19,000,000 bales for 1911.

Within 10 years we will be figuring on cotton crops of 20,000,000 bales. The "coming" cotton grower will have to meet and solve two problems; first, to reduce the cost of growing cotton, and second, to advance the wages of labor employed on the farm. Some Louisiana planters have solved said problems in this manner: First, produce all necessary food crops for animals and labor on the cotton plantations, and second, open a "home market" on the plantation for "food crops" grown thereon. Pure cane syrup is made on Delta cotton plantations at 25 cents per gallon; dressed hogs at 3 cents per pound; corn at 30 cents; potatoes 25 cents per bushel, besides vegetables. Sell these food crops on the plantation and in the towns at 100 per cent profit over the cost, and then pay first-class farm labor \$18 per month with a home free of rent. If cotton crops can't pay the wage scale, other crops can. A. E. KENNEDY.

Monroe, La.

BIG ARTESIAN WELLS IN FLORIDA**Supply Water-Power in Mining Phosphate Rock.**

Mr. Wm. E. Hughes, president of the Hughes Specialty Well Drilling Co. of Charleston, S. C., in a letter to the MANUFACTURERS RECORD gives some interesting information in regard to the abundant supply of water secured through artesian wells in what is known as the pebble phosphate district of Florida. This comprises a section of Hillsboro, Polk and De Soto counties. Writing of that he says:

"This rock in that district is a small pebble, ranging in size from a pea to a hen's egg. It invariably lies in a sticky, sandy clay, and in nearly all deposits it is mined under what is known as the hydraulic process, somewhat similar to the mining of gold. This process requires an enormous quantity of water, which is discharged into the beds of phosphate rock by what is known as hydraulic giants or hydraulic guns, the water being fed to these giants or guns by tremendous water-works plants or pumping stations. To supply the water plants an almost unlimited supply of water is required, which in that district is principally derived from deep artesian wells of large bore and capacity, the largest of which at present is 18 inches in diameter, although there are several now under construction the same size. Among the mines there are something over 75 wells, the majority of which this company has sunk. The wells range in size from 10 inches to 18 inches in diameter,

from 300 to 1200 feet in depth, and in capacity from 500 to 7000 gallons per minute per well; average depth of casing in these wells is about 200 feet; balance of the average wells are uncased to the bottom. Standing head of water in the wells will average 50 feet from the surface.

"The formation is a shaly marl, conglomerate rock, shaly marl and finally a hard crystalline limestone, all of which have numerous water-bearing strata; in fact, through numerous parts of the State where this formation exists a number of underground streams have been struck.

"Where these underground streams are encountered the capacity of the wells is limited only to the size of the pipe."

One Year at Wheeling.

Board of Trade,

Wheeling, W. Va., January 22.

Editor Manufacturers Record:

The thirteenth annual meeting of the Wheeling Board of Trade was held January 10, at which the following new officers were elected: Mr. C. A. Robinson, president; Mr. S. M. Rice, first vice-president; Mr. H. W. McLure, second vice-president, and the following directors: Seaton Alexander, H. F. Behrens, Chas. A. Bowers, R. M. Browne, Fred J. Fox, Andrew S. Hare, Robert Mazlett, George Hook, C. R. Hubbard, W. B. Irvine, Geo. O. Nagle, John H. Rennard, Henry M. Russell, C. H. Watkins, Jr., and W. Alfred Wilson.

The secretary rendered a lengthy report, setting forth the work of the board and pointing out its various accomplishments. Among the most important of these are the location of several new industries, the building of the Market Auditorium, securing of West Virginia's Semi-Centennial for Wheeling in 1913, the inauguration of a \$1,000,000 guarantee plan movement for helping new industries, numerous good-road improvements, including the inauguration of a \$500,000 bond issue movement for the improvement of our county roads, and which is fast taking form, and which will pave or macadamize all our county roads; entertaining several large and many small conventions which brought thousands of people to Wheeling; secured numerous improvements in our already fine railroad facilities, and many other things too numerous to mention.

The board has been very busy the past year advertising the city, and has sent out upward of 25,000 pieces of literature.

The year 1911 has seen a marked upward trend in all lines of business, and the prospects for 1912 are very bright.

R. B. NAYLOR, Secretary.

Working for a Georgia County.

Chamber of Commerce,

Lagrange, Ga., January 22.

Editor Manufacturers Record:

The local Chamber of Commerce has begun pushing every kind of farm development. Among the efforts now being put forth are a soil survey of Troup county under Federal supervision, an analysis of soils by the State College of Agriculture, an issue of 5000 booklets, circulars, circular-letters, etc., to Northern and Western farmers, co-operation with Government's farm land demonstrator in having a 10-acre tract planted in seven different cereals to serve as concrete examples of the ability of Troup county to raise cereals, and an actual demonstration farm where more than 40 different kinds of products of the soils are raised. This year will see a surprising advance in the farming methods employed in Troup county, by reason of the application of scientific and diversified farming ideas to practical farming in Troup county. In view of the fact that many new settlers are coming into this

section, there has been found a great necessity for better farming conditions, a fact which has just been dawning upon most progressive Georgia communities. Farm buildings are being built in Troup county this year at greater expense than ever before, and the business men and farmers alike have realized that the time for definite, concerted action along the lines of better farming has come.

LESTER C. BUSCH, Secretary.

Horine Development Co. Plans.

Referring to the plans of the Horine Development Co. (Edward M. Horine of Atlanta, president), W. M. Hunley of University, Va., writes to the MANUFACTURERS RECORD in part as follows:

"The Horine Development Co. has been organized for the development of a large tract of mountain and valley land in Walker county, Georgia. The tract consists of about 6000 acres, and is situated 25 miles south of Chattanooga on the Tennessee, Alabama & Georgia Railroad. It is also within two miles of the Central of Georgia Railroad. The company's holdings are underlain by extensive deposits of limestone and shale. This material is highly suitable, according to the official report of Dr. T. Poole Maynard, assistant State geologist of Georgia, and a report of the Detroit Testing laboratories, for the manufacture of Portland cement. The valley land owned by the company is, according to the report of Thomas Hudson, Commissioner of Agriculture of Georgia, as well adapted for agricultural purposes as any land in the South.

"The company plans to begin the erection of plants immediately. It contemplates an output as follows: 1. Portland cement. 2. Crushed rock, fluxing rock, ballast for railroads, concrete rock, road metal and top-dressing for roads, pulverized rock, dryer for fertilizer, filler for fertilizer, fertilizer for sour soils, substitute for concrete sand. 3. Lime, ordinary building lime, hydrated lime.

"The property also contains valuable deposits of Clinton iron ores. The shales, besides being suitable for making cement, are adapted for the manufacture of brick. The company's building plans include the following: Cement plant with a kiln capacity of from 2200 to 2800 barrels per day; crushed-stone plant with daily capacity of 2300 tons, with subsequent addition of several No. 6 crushers, increasing capacity to 8000 tons per day; lime plant with capacity of about 75 tons per day."

For Packing and Canning.

Business League.

Greenwood, Miss., January 19.

Editor Manufacturers Record:

We are endeavoring to locate some Northern capitalists to establish a meat-packing plant. They ask that we give them 20 acres of ground for site, together with a cash bonus. They state that they will spend \$50,000 for buildings alone, and would work 75 men, bringing half this number with them that are experienced men. All that we can say is that we are working on this matter, and feel sure that our people will do anything in reason and co-operate in every way with these or any other people coming to Greenwood to make the enterprise a success. We are not at liberty to give out further information just now. We also have a proposition from a practical canning man to establish a canning plant in Greenwood, said plant, together with machinery, to cost about \$10,000. All that is asked is that our people guarantee to grow 500 acres of tomatoes, but he will buy other truck that they will raise. We see no reason but that we will land this proposition in the very near future.

G. W. CARTER, Secretary.

To Colonize Louisiana Land.

Referring to plans for developing land at Genesee, La., John R. Galey of Chicago writes to the MANUFACTURERS RECORD as follows:

"The purpose of the Genesee Louisiana Land Co. is to sell the lands which we have contracted for, embracing about 37,000 acres of cut-over lands. These lands are located on the east bank of the Tangipahoa River in Tangipahoa parish, Louisiana, about four miles north of Hammond and 54 miles from New Orleans, on the main line of the Illinois Central Railroad. The soil is described by the Government as Monroe silt. It is a very rich fertile soil, with a good clay subsoil, which is very fine for strawberries. All kinds of vegetables and trucking can be raised, and an excellent quality of sugar-cane and very fine corn. Our purpose is to sell this tract of land to Northern farmers who will be actual settlers, and will build for them such improvements as they may need or require on their holdings."

The company was organized by the land department of the Genesee Lumber Co., Mr. Galey and others, and it is understood their plans include establishing an 80-acre experimental farm and a town to be named Jessica.

Pensacola Commercial Association.

The Pensacola (Fla.) Commercial Association has elected for the year Messrs. C. E. Dobson, president; C. W. Parker and A. H. Warren, vice presidents; Leland J. Henderson, secretary, and as chairmen of special committees the following: Agriculture, M. J. Lillard; banking, insurance, real estate and taxation, J. C. Watson; city development, Dr. L. DeM. Blocker; development of West Florida and adjacent territory, A. M. Avery, Jr.; finance and membership, Alba H. Warren; harbor and shipping, I. H. Aiken; house and entertainment, B. S. Williams; manufacturing, F. F. Bingham; publicity and promotion, John E. Stillman; tourist travel and accommodation, Henry Jeudevine; trade statistics, Alex. Friedman; transportation, freight rates and service, Cad. Jones; transportation, passenger rates and service, F. L. Mayes; ways and means, W. S. Ware, and wholesale and retail trade, C. W. Parker.

For Southwest Georgia.

[Special Cor. Manufacturers Record.]

Albany, Ga., January 20.

The Albany Chamber of Commerce will hold a big Southwest Georgia "Get Together" meeting in Albany on February 14. Five representatives from the leading cities and towns of Southwest Georgia will be invited, and it is thought that the meeting will be one of the largest and most enthusiastic ever held in this section of the State. The general purpose of the meeting is to get the representative business men closer together; possibly into an organization for the general purpose of advancing the interests of Southwest Georgia.

Buck Creek Cotton Mills.

Describing its plant (recently enlarged), the Buck Creek Cotton Mills of Siluria, Ala., writes to the MANUFACTURERS RECORD as follows:

"We have one of the best-constructed mill buildings in the South; 565 feet long; 77 feet wide; two stories; carding and spinning upstairs; spooling, slashing, weaving, etc., downstairs. This building was erected by T. C. Thompson & Bros. of Birmingham. We have 20,000 Fales & Jenks improved spindles, and are running 600 Stafford automatic looms. We will have a weekly capacity of about 50,000 pounds of cloth. We are develop-

ing our own electric power, and when the mill is running full we will employ about 300 hands. We have a warehouse building 76x77 feet. The officers of the mill are: T. C. Thompson, president, Birmingham, Ala.; J. W. Cannon, chairman directors, Concord, N. C.; E. Sauvain, secretary-treasurer, Siluria. J. W. Cannon of Concord will dictate the management of the mill."

Highways from San Antonio.

[Special Cor. Manufacturers Record.]

San Antonio, Tex., January 19.

Renewed activity on the part of the Bexar County Highway League is expected to result this year in the construction of several highways leading out of San Antonio to points of interest. A modern improved thoroughfare extending between San Antonio and Port O'Connor on the Gulf of Mexico is one of the plans proposed to be carried out during the year 1912. This highway would pass through Sutherland Springs, Cuero and Victoria, the heart of the finest farming country in the State of Texas, and the drive will prove delightful for automobiling parties. The highway will be about 150 miles in length.

Another improved road to be constructed will extend between San Antonio and the site of the dam on the Medina River, about 30 miles from the city. This dam site and the lake above are destined to be objects of interest to the people of San Antonio and to tourists for many years to come, especially since boating and fishing on the lake will be popular diversions, so this improved highway is regarded as a necessity.

Memphis Street Improvements.

During 1911 the city of Memphis invested about \$1,000,000 for street improvements, and plans for 1912 provide further betterments costing about the same amount. Various contracts have already been awarded for 1912 work, and other contracts will be awarded during the year, proposals being invited from time to time. Sixty streets were included in the 1911 betterments. About \$40,000 was expended on Chelsea avenue, \$50,000 on McLean Boulevard, \$50,000 on East McLemore ave., \$65,000 on Peabody avenue and \$30,000 on McNeil street.

To Develop Florida Land.

The Jacksonville Pines Co. is being organized to develop about 21,000 acres of land within 10 miles of Jacksonville. It plans extensive improvements, developing a certain acreage for pecan orchards and utilizing another portion for settlers and the establishment of a town. The land was recently purchased by James A. Mandeville of Newark, N. J., and associates. They are organizing the company named.

Construction of the new union station at Tampa, Fla., is reported proceeding steadily, and it is expected that it will be ready for use in about six weeks. All the brick work and most of the outside has been finished, and construction of the umbrella sheds is under way. The annual meeting of the Union Station Company takes place February 13, and then the date for the opening will probably be determined.

The Southern Appalachian Coal Operators' Association will hold its annual meeting at Knoxville, Tenn., on February 13, when addresses will be made by Dr. Jos. A. Holmes, chief of the United States Bureau of Mines, State Geologist C. G. Norwood of Kentucky, Chief Mine Inspector G. E. Sylvester of Tennessee and Neil Robinson of Charleston, W. Va.

Literary Notes.

Cement Pipe and Tile. By E. S. Hanson, editor of the *Cement Era*. Published by the Cement Era Publishing Co., Chicago. Cloth. Price \$1.

This second edition of a book of which the earlier edition was written less than three years ago indicates the rapid development which has taken place in the cement industry in that time. It is not intended to be the final word on the subject, and the author states as his belief that succeeding years will show many important developments which will require subsequent editions. He has personally visited many pipe and tile plants, and has also drawn on other sources of information, so that he has brought together all obtainable matter relating to each phase of the industry. It is noted as a fact of considerable historical interest as well as economic importance that the period of rapid development in the use of cement has been coincident with the widespread awakening of interest in matters of irrigation and drainage in which cement pipe and tile are used. Cement pipe for irrigation work has been given an impetus by the immense amount of reclamation work done by the Government, private companies and individuals, much of which could scarcely have been undertaken but for the possibilities of cement. The number of machines for the manufacture of cement pipe indicates still greater developments. Following these statements the author presents a treatise of his subject in 12 chapters, with many illustrations. These chapters include the following subjects: Advantages of cement for pipe and tile; concrete pipe sewers; pipe for pressure service; concrete pipe for culvert; methods of manufacture and curing; machines and systems on the Market; tests for cement work.

Works Management. By William Duane Ennis, M.E. Published by the McGraw-Hill Book Co., New York and London. Cloth. Price \$2.

It seems to be the present current belief that there exists an art of management without regard to each special application; in other words, that there are underlying principles of efficiency that are germane to all business. This volume has been written with this principle as a basis. Every American wants to see the United States attain and maintain industrial supremacy. The growth of a philosophy of works management has been an American growth. Every man should know something of the new ideals of industrial management. Superficial knowledge may have little available value, but there are things so important that we must all know something about them. There are industrial management problems to be attacked by other methods than those which have had widespread recent discussion. The author endeavors in this book to be specific as to some of the principles which underlie the methods of good management, without dealing with cost keeping and records in highly specialized way, or with filing systems and conventions or with applications to some special trade which may have no interest to the reader. The author holds that the idea of reducing management to a compact and complete body of rules is chimerical, and that any attempt to do so must fail. But there are certain established methods, customs and expressions which it is entirely feasible to present in orderly form for the guidance of those whose vocations are supervisory and who seek to profit by the accumulated experience of others. To such this volume will be found of particular value and interest, and a thorough study of the book indicates that it contains points of interest to men of almost every industry and business.

GOOD ROADS

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

Bonds Voted.

Hendersonville, N. C.—City voted bond issue for 20,000 square yards of asphalt pavement; cost \$20,000.

Sanford, N. C.—Lee county voted \$100,000 bond issue for road improvements.

Bonds to Be Voted.

Americus, Ga.—Sumter county will vote on \$100,000 bond issue for road construction.

Port Lavaca, Tex.—Calhoun county, precinct No. 4, will vote on \$100,000 bond issue for road construction.

Springfield, Tenn.—Robertson county votes February 24 on \$300,000 bond issue for road construction.

Contracts Awarded.

Birmingham, Ala.—City awarded contract for paving portion of 30th street with bitulithic.

Gilmer, Tex.—Upshur county awarded contract for constructing 18 miles of road.

Little Rock, Ark.—City awarded contract for paving Rector avenue with vitrified brick and 3d street with creosoted wooden blocks.

Louisville, Ky.—Board of Public Works awarded following contracts for street paving: Market street, vitrified block; Shelby street, vitrified block; Brook street, vitrified block; Walnut street, asphalt.

Contracts to Be Awarded.

Atlanta, Ga.—City will pave Highland avenue at cost of \$7000.

Baltimore, Md.—J. Spence Howard is considering bids for improvements to tract of land between Forest Park and Windsor Hills.

Barnesville, Ga.—City will grade and improve streets and sidewalks.

Beaumont, Tex.—City will pave additional streets at cost of about \$300,000.

Chattanooga, Tenn.—Hamilton county is arranging to construct two and a half miles on Lookout Mountain-Wauhatchie road; estimated cost \$65,000.

De Funiak Springs, Fla.—Walton County Commissioners receive bids until February 17 for 60 miles of sand-clay roads in Township 3 north, including necessary culverts; also 35 miles of main line running east and west through entire county, and 25 miles of lateral roads running north and south.

Dukedom, Tenn.—Fulton & Dukedom Gravel Road Co. organized to construct roads.

Durham, N. C.—City will grade and macadamize Oakwood avenue; cost \$2000.

Elberton, Ga.—City will improve streets; cost \$25,000.

Fort Smith, Ark.—City will pave Garrison avenue with brick, asphalt or creosote block.

Galveston, Tex.—Galveston county receives bids until February 5 to grade, shell, bulkhead and otherwise improve Avenue 8 road.

Galveston, Tex.—City receives bids until February 1 for 1000 square yards of pavement on four-inch concrete base, 11,810 square yards on sand base, 1500 linear feet of concrete retaining bulkhead, and taking up and relaying about 70 square yards of brick paving.

Hazlehurst, Miss.—Copiah county opens bids February 5 for 35 miles of gravel road.

Heena, Ark.—City opens bids Febru-

ary 2 for 20,000 square yards brick paving; amount available, \$50,000.

Jackson, Miss.—Highway commission first and fifth districts of Hinds county receives bids until February 8 for construction of Jackson and Terry sand and clay road.

Louisville, Ky.—Board of Public Works opens bids February 7 for vitrified brick paving on 9th street, Xavier and Oak streets; February 5 for reconstruction of 10th street with vitrified brick at estimated cost of \$5600.

Memphis, Tenn.—Shelby county receives bids until February 1 for graveling State Line road.

New Orleans, La.—City will pave or repair Burgundy street.

St. Augustine, Fla.—City receives bids until January 31 for grading, paving and curbing Saragossa street.

Tazewell, Va.—Tazewell county receives bids until February 13 for grading, draining and macadamizing 113 miles of road.

West Point, Miss.—City will macadamize five blocks, probably with novaculite.

How to Win a Good-Roads Fight.

Young Men's Business Association,
Sherman, Tex., January 20.

Editor Manufacturers Record:

District No. 2, of which Sherman, Grayson county, Texas, is the center, has voted a \$400,000 bond issue for good roads. In addition to the usual opposition to such a project, there existed an unusual state of affairs in this section that militated against the desired end. Along with the other sections of the country, there had been a short crop. The election was called just prior to the Christmas holidays. The roads in all directions were in a splendid condition, and had been for two years. The farmers said there was no need to build good roads. The farms in the district are almost entirely occupied by renters. In Sherman the men most affected by the increased tax rate and who owned these farms were what is known as "town farmers." These "town farmers" are non-progressive; are greatly opposed to improvements that will add to their tax rate.

Sherman is a wealthy, conservative city, surrounded by a renting population. A more unfavorable condition for the successful outcome of the good-roads campaign is not to be conceived. All of these questions were carefully considered by the Young Men's Business Association of the city, and it went to work in October on a vigorous campaign.

The Board of County Commissioners asked that a Government Engineer from the Department of Public Roads at Washington be assigned this district, which request was granted. The Government was also requested to lend us a set of good-roads stereopticon slides, which it did.

In November we began the active campaign, holding meetings every night in some country schoolhouse in the district, the last two weeks doing the same in the city. The entire expense of the campaign for two and a half months, including auto trips, was only \$985.

On November 20 the Board of County Commissioners were petitioned to call the election. This petition was signed by some 200 names, including bankers, wholesale merchants, professional men, farmers and laboring men. The election was ordered, and resulted in 937 votes in favor of good roads and 415 against, a total of 1349 votes out of a possible 1800.

E. E. BARCLAY, Secretary.

Richmond and Washington Highway

Referring to plans for securing the construction of a direct highway between Richmond and Washington, T. M. Car-

merce writes to the MANUFACTURERS RECORD as follows:

"The plan is yet in its inception, but the project is one of such interest that it is confidently expected some definite lines of action will be promptly determined upon. In addition to the value of such a highway between Washington and Richmond, it would constitute a most important and direct link in the proposed highway from Quebec to Miami, a movement now enlisting, as you doubtless know, most powerful support. The Chamber feels assured of the co-operation of our city authorities and of the counties intervening between here and Washington, and it can also count upon the active aid of the Richmond Good Roads Association and of the Richmond Automobile Association. The Richmond, Fredericksburg & Potomac Railroad Co. has indicated its interest by a most liberal offer in reference to the transportation of material. In the near future a meeting will be called by the Chamber to organize all these forces and to consider the route, of which a preliminary survey and map has recently been made."

To Spend \$100,000 on Roads.

Chamber of Commerce,

Raleigh, N. C., January 22.

Editor Manufacturers Record:

The county of Lee, which not long since voted down a bond issue for roads, now comes forward and by a vote practically unanimous has decided to expend \$100,000 on its highways, including a very important stretch of the Capital Highway, between Augusta and Washington, this being the road in which Mr. Leonard Tufts is so deeply interested, he being the president of the association and having personally expended several thousand dollars on this highway.

FRED A. OLDS, Secretary.

Baltimore Paving Improvements.

Having adopted paving specifications and selected eight miles of streets to be improved from the \$5,000,000 loan recently authorized, the city of Baltimore is ready for its most active year in street improvements. Bids will be invited soon for work amounting to about \$400,000, and are expected to be opened by February 14. By March 1 it is expected that another eight miles will be contracted for, and by May 15 contracts for about 10 miles additional are expected to be awarded. These contracts will represent 25 miles of streets, and will cost about \$1,500,000.

Bids for 60 Miles of Roads.

Florida is not neglecting the movement for modern highways, and St. Lucie county is now inviting bids for constructing 60 miles of hard-surface roads, bridges and docks. These bids are to be opened on February 7, and \$200,000 of bonds have been issued for the work referred to. The county clerk of Fort Pierce or the engineers, D. C. and C. M. Rogers of Daytona and Fort Pierce, can be addressed.

For 35 Miles of Highway.

A big contract for roads will be awarded by the supervisors of Copiah county, Hazlehurst, Miss. It will call for constructing about 35 miles of gravel highway, and proposals have been invited, to be opened on February 5. Plans, specifications and profiles are on view at Hazlehurst and the office of the engineer, the George Company, in the Randolph Building at Memphis.

Reflecting the influence of the peach-growing industry in Georgia is the statement of President W. B. Hunter of the Georgia Fruit Exchange that 904 carloads of peaches were shipped from the State in 1909 and 897 carloads in 1911.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

TEXAS IRON ORE ROAD.

Line and Dock Completed to Handle Output of Mines via Rail and Water.

Luther Ellison, secretary of the Chamber of Commerce, Longview, Tex., writes that Port Bolivar Iron Ore Railroad, just being completed 30 miles north from Longview to the noted iron-ore fields of the eastern part of Texas, will be officially opened within the next 20 days. It will open up what is expected to be a tremendous business in the handling of ore, one which may have a wide influence upon the iron and steel industry.

In preparation for the output of ore to come from the Cass county fields in the vicinity of Ore City, the northern terminus of the Port Bolivar Iron Ore Railroad, the Gulf, Colorado & Santa Fe Railway, of which the new line is an extension, has just completed at Port Bolivar, Tex., on Galveston Bay, a temporary iron-ore dock costing more than \$40,000, and it is expected that the first cargo will be handled over the dock in the latter part of January or the first of February. This ore, it is said, will be shipped to Philadelphia as the first instalment on a contract for many thousands of tons. Only three men are required to operate the ore-handling machinery on the dock, yet 3200 tons of ore can be loaded on a ship within eight hours. Ten 40-ton ore cars can be handled each hour.

It is further stated that within a year and a half or two years \$500,000 will be expended at Port Bolivar for a system of ore docks which will be remarkably complete.

The operation of the present dock is notable in that the engine employed uses distillate oil for fuel. It is claimed that this oil in carload lots costs two and a half cents a gallon, as compared with eight cents for gasoline. The engine operates a drum and steel cable for hauling the loaded ore cars up an incline to the top of the dock, whence its contents can be dumped into the ships by means of chutes. The machinery was installed under the direction of W. G. Massenburg, division engineer, and was selected after a study of the ore-handling machinery at Escanaba, Duluth, Superior, Marquette and Hibbing, Minn.

Facilities are provided for storage of ore when no vessels are awaiting cargoes and ore is arriving from the mines. The ore in such event is dumped from the cars upon the ground beneath the incline leading to the top of the dock. When this ore is wanted for cargoes it is again handled into the cars by means of a locomotive derrick crane with clamshell scoop, after which the cars are unloaded from the top of the dock into the ships.

COAST LINE LOOKS WEST.

Announcement That Reported Links Will Be Constructed in Florida.

The Atlantic Coast Line, according to a report from Tampa, Fla., quoting Morton Riddle, division superintendent at Jacksonville, will build two new connecting links in the western part of Florida, which will give it a through route between Tampa and the West. The connections have been rumored for some time, and the first will be from Dunnellon to Oldtown, Fla., 42 miles, and the next from Monticello to Perry, Fla., 33 miles. They will connect up existing roads of the company and thus furnish a direct route west via Thomasville, Ga., north to Albany, Ga.,

and west also from Thomasville over the company's own line to Montgomery, Ala. Thus connection could be made at Albany with the Central of Georgia, which is an Illinois Central road, and at Montgomery with either the same line or the Louisville & Nashville, which the Coast Line controls, or the Mobile & Ohio Railroad. Rights of way are now being obtained between Dunnellon and Oldtown. The completion of the connections will afford the company a very direct route down the west coast from Monticello, Fla.

MEMPHIS & PENSACOLA.

Franchise Granted at Gulf Terminal—Fully Expected Line Will Be Built.

A letter from Pensacola, Fla., to the MANUFACTURERS RECORD says that the city has granted a franchise to the Memphis & Pensacola Railroad Co. for its contemplated entrance and terminals. A local report says that all indications are that the road will be built from Memphis to Pensacola. It will traverse a section of country capable of developing extensive business in lumber and naval stores, besides a rich and prosperous country to the west and north, and the enormous production of each must have a railroad outlet to the Gulf, which will be afforded at Pensacola, one of the finest of harbors.

It is further reported from Meridian, Miss., that A. C. Olney, who has been connected with C. D. Smith & Co. of Memphis, contractor for the line, has been placed in charge of survey there to locate the route. There are three engineering parties in the field, one working from Memphis toward Meridian, another from Meridian toward Memphis and the third from Meridian toward Pensacola.

W. P. Dickinson of W. P. Dickinson & Co., 105 S. La Salle street, Chicago, who entered the board several months ago, says with reference to the granting of franchise at Pensacola that the company will probably enter upon a dock improvement there costing ultimately about \$5,000,000. A small amount of construction is being done south of Grenada, Miss., to hold the route chosen. On the docks at Pensacola it is expected to erect a large fireproof warehouse, which will be under State supervision, for the storage of cotton awaiting shipment abroad, besides other products, and it is hoped to handle much foreign money on these warehouses. To attain such results will take some time and much work.

CLINCHFIELD TERMINALS.

\$400,000 to Be Spent, Says President Potter, at Charleston, S. C.

Concerning a report that the Carolina, Clinchfield & Ohio Railway would begin construction of terminals at Charleston, S. C., within 60 days, Mark W. Potter, president of the company, New York, wires the MANUFACTURERS RECORD thus:

"It is my expectation that construction on Charleston terminals will begin at early date, but cannot say that this will be within 60 days. Character of construction not definitely decided; probably steel, to cost approximately \$400,000."

Bladensburg to Berwyn.

J. Spence Howard, chief engineer of the Washington, Spa Spring & Gretna Railroad Co., which is operating a line from Washington, D. C., to Bladensburg, Md., and is completing an extension of 4½ miles from Bladensburg to Charlton Heights, formerly Berwyn, Md., says that the work requires considerable grading and the construction of four light concrete and steel bridges. It has progressed rapidly, the grade is 90 per cent. completed, and nearly all the concrete is in place. The crossties have been delivered, arrange-

ments have been made for the rails, and the extension will probably be in operation by April 1, using storage battery cars and opening up a section of Prince George's county heretofore rather isolated from existing railroads. The grades are light, and it is hoped to make the run from Washington to Berwyn in 30 minutes. Thomas Hampton of that city is contractor, furnishing all material and labor. Mr. Howard's address is 11 E. Lexington street, Baltimore, Md.

Mr. Howard further says that the Southern Maryland Land & Improvement Co. of Washington has purchased the old Lowndes estate in Bladensburg; it is located on the line of the new railway, and contains about 80 acres. He has prepared a topographical survey and street and lot plan for the development of the property, and early in the spring operations will begin for grading and improving the streets, etc.

Contemplates Extensions.

The Cary North & South Railroad, a Georgia corporation which is building a line from Cochran, Ga., on the Southern Railway, northward via Cary to Danville, on the Macon, Dublin & Savannah Railroad, about 18 miles, has applied for an amendment to its charter for an extension from Danville to Toombsboro, 21 miles northeast, with two diverging lines from Toombsboro, one going northwest to Milledgeville, 24 miles, and other northeast to Sandersville, 20 miles. These lines, if built all the way from Cochran to Sandersville, will result in a direct railroad through a section that is now without a road running in the same general direction. Moreover, it would have the branch to Milledgeville at right angles to the main line. It is stated that the line from Cochran to Cary, about 10 miles, will be completed about June 1 next. H. R. Brown of Macon, Ga., is president.

A Line in Two States.

The Georgia & Alabama Railroad Co. of Wedowee, Ala., has been incorporated to build and operate a railroad from Tallapoosa, Ga., to connect with the Atlanta, Birmingham & Atlantic Railway at or near Malone, Ala., which is in Randolph county, about 75 miles east of Birmingham. The line will run from Tallapoosa, which is on the Southern Railway, southwest through Haralson county, Georgia, and Cleburne and Randolph counties, Alabama, and will, it is said, develop a region containing copper and other minerals, besides timber and farming lands. It will go via Wedowee, the county-seat of Randolph county, and which it now without railroad facilities; capital stock authorized, \$250,000; subscribed, \$50,000; incorporators, C. R. Porter, T. J. Simpson, J. C. Porter, G. R. Hutchins and Alex. T. Hamilton.

Railroad Warehouse.

The Atlanta, Birmingham & Atlantic Railroad proposes to erect a five-story concrete warehouse on its property at Haynes and West Hunter streets, in Atlanta. The building will be 300x70 feet. Alex. Bonnyman, general manager at Atlanta, is preparing the plans, which will call for about 100,000 feet of floor space. H. M. Atkinson of Atlanta and S. L. Schoonmaker of New York are receivers of the road, who will approve the plans.

Rails for the Megargel Road.

A cargo of rails for the Gulf, Florida & Alabama Railway has been received at Pensacola, Fla., says a letter from there, on the Mallory Line steamer Altamaha. This is the railroad which is being constructed by R. C. Megargel of New York and others from Pensacola toward Tusca-

loosa and Jasper, Ala. The rails just received will be laid between Pensacola and Cantonment, about 20 miles, at which latter point connection will be made with the Southern States Lumber Co.'s road, which was recently acquired by the Gulf, Florida & Alabama, and which will carry the line 50 or 60 miles farther on its way. Surveys are in progress beyond the northern terminus of that railroad toward Tuscaloosa and Jasper.

New Equipment.

President H. H. Mayberry of the Nashville & Gallatin Interurban Railway, Nashville, Tenn., is quoted saying that the company will order immediately four passenger cars and one baggage car.

The Norfolk & Western Railway has ordered 15 Mallet locomotives from the American Locomotive Co., New York.

The Chesapeake & Ohio Railway is reported contemplating the purchase of 100 box cars.

The Dallas (Tex.) Consolidated Electric Street Railway is expected to purchase 10 double-truck cars.

The Virginian Railway has ordered four Mallet compound locomotives with superheaters from the American Locomotive Co.

The Atlanta, Birmingham & Atlantic Railroad, it is reported from Atlanta, will purchase 10 Mikado type locomotives.

Columbia to Camden.

Steps looking toward the construction of a railroad from Columbia to Camden, S. C., about 30 miles, are being taken. It is contemplated to build an electric line, and a bill has been introduced in the Legislature to incorporate the Columbia & Camden Railroad Co. for the purpose. The route selected is via Dent's Pond, which lies in a tract of land recently acquired by B. L. Abney and others, and which contains 700 acres. The incorporators of the railroad company are B. L. Abney, G. A. Guignard, E. M. Thomson, W. Boyd Evans and F. H. Weston of Columbia. Its capital stock is to be \$250,000.

To Extend Westward.

C. E. Ensminger, second vice-president and general manager of the Quanah, Acme & Pacific Railway, Quanah, Tex., writes that it is proposed to build 50 miles of additional line from Paducah to Plains, Tex., through rolling country. It is indefinite as to the date for receiving bids for construction. Bridging on the route will consist of piling and frame trestles. Mr. Ensminger is also chief engineer of the road.

An Oklahoma-Kansas Plan.

The Beaver, Meade & Englewood Railroad Co., capital \$25,000, has been chartered in Oklahoma to build a line from Beaver, which is in the northwestern section of the State, to both Englewood and Meade, Kans., about 70 miles. The incorporators are Fred. C. Tracy, John W. Webb, William T. Quinn, Elbert Clift, Robert McFarland, Levi S. Hunsell and Frank Laughrin, all of Beaver, Okla.

Railroad Notes.

The Alabama Great Southern Railroad of the Queen & Crescent Route is reported contemplating the equipment of its entire line with automatic block signals at a cost of about \$50,000.

The New York Central Railroad has established a commercial agency at Norfolk, Va., in offices at the Bank of Commerce Building, with W. L. Dewey in charge. It also has offices at Richmond and Winston-Salem. Rumors that the New York Central would absorb the Virginian Railway were officially denied.

MINING

Possibilities of the Cumberland Coal Field in the Gas Coal Trade.

With a view to determining the necessary action and policy to be adopted by the American Association, Inc., owning very large coal areas in the Middlesboro (Ky.) section, in order to maintain a satisfactory demand and price for the coal mined by the lessees of that company, Mr. A. S. B. Little, general manager of the Atlas Paint Co., Nashville, has recently made a thorough investigation of the conditions existing in the production and sale of coal by the 20 lessees in the American Association, whose mines are near Middlesboro, Ky. The immediate object of this report is to try to make a coal field that is now supplying only the railroads and local markets of the two States possible of development so that contracts will be taken in the commercial field, particularly among gas companies. It is believed by Mr. Little that the adoption of the plans outlined would mean an increase in the value of this already developed field to the extent of about \$18,000,000.

The report states that the low prices which this coal has commanded are in a great part due to the fact that it has been mostly limited to what may be called local sales and to the railroads. Quoting extracts from the report, the following points are taken to show the great advantage to be obtained by securing a stable market for this coal, which is suitable for both commercial gas production and for coking coal. "Take Pennsylvania in comparison, selling over 120,000,000 tons of soft coal a year, and the southeastern district of Kentucky, selling 2,431,000 tons in the year 1904. In the case of Pennsylvania the huge sales were due almost entirely to demands of other States and for purposes which have been neglected by the East Kentucky and Tennessee operators. A point for consideration and reflection is that with known good value gas making and coking coals in the Southeastern Appalachian field, no real effort seems to have been made to sell either gas coal for city gas trade or for beehive ovens. The local ovens are now shut down, as they were never really built on economic lines. How are the more favorable conditions existing in Pennsylvania for sales accounted for? Simply by the more stable market for Pennsylvania coal, not affected by purely local railroad or State conditions. A company, a city or a State that relies upon one class of industry may have at best good years and poor years. Coal districts are peculiarly susceptible to a falling off in trade, but to this there is one exception. It is a well-known fact that the manufacture of illuminating gas for lighting and cooking purposes very seldom experiences a reduction in any year. The average increase in production of city gas is not under 5 per cent. per annum, while even in years of panic or business depression there is no decrease in the consumption of gas. It will be apparent that when catering to this trade one has a steady demand to meet, and with long contracts prices do not suffer. The average price is almost constant for a good, clean, uniform coal." The report refers to the Monongahela and Youghiogheny River district as being a thoroughly reliable source for gas coals needed by American public utility companies, including illuminating and heating gas producers, and this reliability and well-established condition is given as one of the reasons for the advantage of that district in large sales and steadier values than obtained in the Eastern Kentucky and Tennessee district. "The Pitts-

burgh gas coal supply is not unlimited for the purposes of modern demands," continues the report. "For this reason a new supply area is hailed with delight by all gas men. Furthermore, gas companies do not need or call for lump coal. For all practical purposes they prefer that which goes over half inch or one inch and through three or four-inch bar screens. This leaves the coal company large lumps to satisfy existing demands at good prices for domestic purposes outside of the gas trade.

"The selling expense is not high, considering the desirability of the trade, and the enhanced value given to the coal through experienced selection. It is hardly necessary to explain further why the present report looks into the possibilities for the production of gas, coking and malleable coal, all low in sulphur, ash and having excellent volatile matter, such as are found in this Cumberland coal field. In that direction lie the greatest possibilities. The average selling price of coal in the Tennessee mines of the Appalachian district in 1909 was \$1 per short ton. In any country but America such prices would be scorned, and even at that wages and other production costs are very much higher than abroad. It will be said that in America the man produces more per dollar than elsewhere, and that machinery is more intelligently used and in a greater degree. This is nonsense, because it is an undoubted fact that mining equipments are developed in Europe as they never were here. I do not know of a single dipping-end conveyor in use in the United States such as is commonly used in all parts of Europe where soft coal is mined. The mines here handle coal like iron ore, whereas soft coal is treated in Europe more as if it were a supply of eggs.

"As bearing on this coal for gas-making purposes, a ton of coal makes about 10,000 cubic feet of 16-candle-power gas, and a low average per capita consumption of gas is about 10 cubic feet per day. Thus a city of 20,000 people would use 200,000 cubic feet per day, requiring about 20 tons of coal.

"If there is a desire to go after this business on a business basis, then the trade can be guaranteed when the mines are ready to fill the orders. For immediate results all arrangements to handle coal must be perfected and the mines be ready to ship coal in quantities before April 1, 1912, and for trial purposes at once. What is the inducement? A steady market at increased prices. The coal must be under average 5 per cent. ash, less than 1.2 per cent. sulphur, over 36 per cent. volatile matter, about 55 per cent. to 60 per cent. fixed carbon, and less than 3 per cent. combined moisture. All these requirements are met by each mine in this district, according to analyses which I have checked up. Selling cost is not high; the field is proven. At the outset a personal visit of an expert coal man is needed to each large gas plant. Such a campaign would be needed only once, and it would result in very large contracts for many years to come. If the mines will guarantee uniformity of product, regularity of loading and prompt handling by railroads, the aim and end of this campaign for the gas coal trade will be easily accomplished. The mining companies will get accrued benefits in value much beyond the expenditure of money, time or exertion necessary to secure them. They will be guaranteed a good business, a steady trade and no decrease in selling price for many years to come."

The importance of the complete report, from which these extracts are taken, in bringing out the possibilities of improving the conditions in the coal districts of Eastern Kentucky and Tennessee, as well as those of West Virginia, is far-reaching.

The requirements of coking and gas coals are such that they are practically removed from direct competition with ordinary steaming coals, so that a trade once established with the gas-producing centers is not subject to the frequent and considerable fluctuations prevailing in domestic and steaming coals. From this it would appear that the estimate of increase in the value of the gas coal mines in the Cumberland coal field of \$18,000,000 is reasonable, and serves as an index to the great increase in the value that might be brought about in all the gas coal districts of Kentucky, Tennessee and West Virginia with proper development and sales management to reach the gas coal users.

TEXAS MINERALS.

Suggestions Based Upon Production Figures of 1910.

Director W. B. Phillips of the University of Texas bureau of economic geology and technology, Austin, reports:

"The value of the mineral products of Texas for the year 1910 is about \$16,500,000, according to the statistics gathered by the United States Geological Survey. The separate items in this total value are as follows:

Asphalt.....	\$1,040,825
Clay industries, excluding pottery..	2,744,845
Coal.....	2,397,858
Granite.....	8,582
Iron ore.....	60,903
Lignite.....	763,107
Lime.....	226,952
Limestone.....	447,239
Mineral waters.....	128,549
Petroleum.....	6,805,755
Pottery.....	112,604
Quicksilver.....	154,413
Salt.....	272,568
Sandstone.....	40,471
Sand and gravel.....	517,225
Silver.....	205,374
Stone, crushed.....	306,862
Tin.....	2,586
	\$16,001,023

"To this total is to be added the value of cement, gypsum, natural gas and sand-lime brick, estimated to be \$500,000.

"Texas also produces a little gold, copper and lead, but these values are small.

"For the first time in its history the State enters the list of tin producers, and it is now the only State which is making tin from native ores. This industry has been established in the Franklin Mountains, 14 miles north of El Paso, where tin ore occurs in granite.

"Since the collection of the earliest reliable statistics the total value of all of the mineral products of Texas is about \$180,000,000. The principal items in this very respectable total are about as follows:

Petroleum.....	\$66,000,000
Coal and lignite.....	31,000,000
Clay products.....	31,000,000
Stone (granite, limestone, sandstone).....	7,800,000
Silver.....	6,500,000
Pig-iron.....	3,000,000
Salt.....	2,900,000
Mineral waters.....	2,400,000
Quicksilver.....	2,000,000

"The most important items are petroleum, coal (and lignite) and clay products, as these comprise more than 65 per cent. of the entire value, \$128,000,000 out of \$180,000,000. No statistics of the amount of coal brought into the State are now available, but it is likely that Texas does not produce one-half of the coal it uses. This is not because there is here a lack of coal-bearing formations, for it is likely that in Texas there are more than 13,000 square miles of coal area, to say nothing of the 60,000 square miles of lignite area. The steady demand for railroad coal, which does not need to be of the same quality as domestic coal, enables the coal operators to neglect the domestic demand, which is of a more intermittent character.

"If we may judge the future by the history of the last 30 years, the most marked development of our mineral resources will be in the direction of petroleum, coal (and lignite) and clay prod-

ucts. If technical instruction is to be given here along the lines of probable needs, it will have to consider these three things first, the nature and uses of petroleum, coal (and lignite) and the numberless varieties of clays which occur in the State.

"It may happen, now and then, that the production of some special substance would indicate certain tendencies toward advances along particular lines. But if we take a period of 30 years and study it in the light of annual and total values we arrive at conclusions based on a surer foundation.

"It may be many years before Texas will reach a more respectable position as a metal-producing State. In the meantime the course of wisdom is to study the problems that are to hand, the more economical and the more profitable use of materials that enter into every-day life.

"We cannot conserve our resources, we cannot plant for their use until we know what they are. It would appear that a State whose mineral products have an annual value of more than \$16,000,000 could afford to offer its services to its citizens in the investigation of ways and means whereby they could be helped."

To Develop Texas Sulphur.

Messrs. S. M. Swenson & Sons of New York wire and write to the MANUFACTURERS RECORD outlining the plan of their firm and associates for developing Texas sulphur. They have purchased about 10,000 acres of land with sulphur mine and river frontage at the mouth of the Brazos River near Stamford, Tex., and are now organizing a company for developing the property to its full capacity. Contracts for the necessary machinery to mine the sulphur have been completed and are in charge of Westinghouse, Church & Co. of New York. Press dispatches state that the development plans include townsite, docks, warehouses, railway terminals, etc., and that the interested capitalists include James A. Stillman, Frank A. Vanderlip, Samuel McRoberts, R. T. Wilson & Co. and A. Chester Beatty, all of New York; John L. Williams & Sons of Richmond, John Hays Hammond of Washington and others. The land purchased extends northward up the river six miles from the jetties built by private capital about 20 years ago and afterwards acquired by the United States Government, which has appropriated funds for maintaining the jetties and deepening the channel.

To Develop Arkansas Antimony.

The Southwestern Mining & Smelting Co., George B. Hall, president, Rochester, N. Y., will develop antimony deposits in Sevier county, Arkansas. Referring to this the company, which is capitalized at \$500,000, wires the MANUFACTURERS RECORD as follows: "About 500 acres; expect to produce 40 tons daily; cost of reduction plant, \$50,000."

Want an Ice Plant.

Board of Trade,
Hawthorne, Fla., January 17.

Editor Manufacturers Record:

The Board of Trade has a nice site for an ice plant and cold-storage establishment which it will furnish free of charge to the right man. Can also place some stock in such a business with local men. Our farmers produce a large quantity of meat, which must be shipped away to be cured. In addition to this, there is a great quantity of ice consumed near here in shipping fish. A great business in local shipments could be readily established here in addition to the amount that is needed here daily.

W. C. MAHIN, Secretary.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

Marietta Knitting Co.'s Addition.

Referring to its recently completed addition, the Marietta (Ga.) Knitting Co. writes to the MANUFACTURERS RECORD as follows:

"Our new building is 52 feet wide, 300 feet long, with an 'L' for oxidizing-room; 200 feet of the building is three stories, with interior partitions and a brick retaining wall along the upper side. It cost about \$25,000. The construction is brick, modern mill type, with a finish floor of maple. The contractors who built this mill are A. J. Eaves & Sons, Cartersville, Ga. Our power plant is being enlarged and an electric generator installed for the operation of the machinery in the new mill building. We hope later to buy current generated by some of our nearby water-powers. The heating system and automatic sprinklers were installed at a cost of \$3300 by the General Fire Extinguisher Co., Providence, R. I.; the plumbing by W. H. Rouche, Marietta, while the electric equipment complete was bought of the Allis-Chalmers Company of Milwaukee. These items, with the additional knitting, dyeing and finishing machinery, runs our addition investment up to about \$45,000. We have installed ready for operation 155 knitters, 52 ribbers and 30 loopers, with room to increase to 216 knitters. When we start up we will require about 170 operatives, and our production will be about 1200 dozen pairs of half-hose per day. Our product is cotton half-hose, sold direct to the trade throughout the United States."

Altavista Cotton Mills.

The Altavista (Va.) Cotton Mills will manufacture fine lawns and fancy cloths from combed yarns. This company writes to the MANUFACTURERS RECORD as follows:

"Dimensions of mill, 350x125 feet, two stories; character of construction, brick standard; number of spindles, 12,600; number of looms, 300; cost of equipment, \$214,000; cost of power plant, \$23,000; cost of building, \$85,000; amount of horsepower, 650 steam; number of operatives, 175; date of completion, March 1; building contractors, Loftin & Sons, Altavista; machinery contractors, Crompton & Knowles Loom Works, Worcester, Mass.; Woonsocket Machine & Press Co., Woonsocket, R. I.; Potter & Johnston Machine Co., Pawtucket, R. I.; architects, Whitted & White, Charlotte, N. C. The officers are: J. E. Lane, president and treasurer; R. L. Cumnock, vice-president and general manager; A. G. Bell, secretary."

Guadalupe Valley Cotton Mills.

The Guadalupe Valley Cotton Mills (successor to the Cuero Cotton Factory), Cuero, Tex., sends the MANUFACTURERS RECORD a statement outlining the new company's plant, writing as follows:

"Dimensions of main mill (including picker, carding, spinning and weaving rooms), 350x150 feet; slasher-room, 100x50 feet; boiler-room, 50x35 feet; entire mill one story, constructed of brick; 7000 spindles and 160 looms. The above includes the new addition, which consists of

3000 spindles, 50-foot addition to main mill, cotton warehouse, office, cottages, and other improvements, at a cost of \$60,000; mill driven by electricity generated by water-power on the Guadalupe River, three miles away; daily capacity 5500 pounds, with 150 operatives; J. C. Saunders, president; W. M. Ratcliffe and S. C. Lackey, vice-presidents; Joseph Sheridan, secretary and treasurer."

Leeco Cotton Mill.

The Leeco Cotton Mills Co. property at Jonesboro, N. C., was sold last week. It comprises what was formerly known as the Eugenia Cotton Mills and the Clark Cotton Mills, equipped with 3744 spindles, 101 looms, steam power plant, etc., for manufacturing cloth. The Eugenia mill was bid in at \$33,000 by J. R. Jones and the Clark mill at \$17,000 by Eugene Erwin, both purchasers being of Jonesboro. These bids cover the bonded indebtedness on the plants. It is stated that Messrs. Jones and Erwin will operate the mills as separate enterprises.

For Central Weave Shed.

The Mt. Vernon-Woodberry Cotton Duck Co. (International Cotton Mills Corporation of New York) will have plans prepared by Lockwood, Greene & Co. of Boston for constructing an addition to its Baltimore plant. This addition will probably be a weave shed (as previously proposed) for 1000 looms, permitting the company to utilize its present mills for spinning only and concentrating all its weaving in a central plant. Dimensions and other details are not ready, but it may be stated that probably concrete construction will be adopted.

Plans \$500,000 Company.

Thomas A. Miller of Greenville, S. C., representing New England capital, plans the organization of a \$500,000 corporation to build a mill at Nashville. He has submitted a proposition to the Nashville Industrial Bureau, and this organization will endeavor to have half the capital subscribed by Nashville investors. The mill contemplated is for 20,000 spindles and 500 looms, to manufacture fine cloth from sea island, Mississippi and Egyptian cotton.

Improvements to Cost \$50,000.

The Asheville (N. C.) Cotton Mills will expend about \$50,000 for improvements to buildings and installing new machinery in connection with its recently announced plan to resume manufacturing. The company manufactures colored cottons, and its present equipment includes 10,112 ring spindles, 450 narrow looms, etc.

A \$300,000 Mill Company.

The E. A. Smith Manufacturing Co. of Charlotte has been incorporated with \$300,000 capital stock, and will build a 15,000-spindle cotton mill. Its incorporators are E. A. Smith (formerly president of the Chadwick-Hoskins Company), Robert Lassiter and Thomas C. Gathrie.

Textile Notes.

The Terra Alta (W. Va.) Woolen Mills will not have definite plans before July for rebuilding plant burned last year.

The Canebrake Cotton Mills of Uniontown, Ala., has been incorporated by W. H. Taylor, G. B. Johnston and associates.

A. A. Hilburn, Henry C. Bridger, Jr., and others of Bladenboro, N. C., are planning the organization of a \$150,000 company to build a cotton mill.

The Royal Woolen Mills Co. of Hagers-town (mentioned last week) will not manufacture woollens. It will make men's clothing.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Grandin Lumber Co. Plans.

Referring to his company's plans, W. J. Grandin of Tidioute, Pa., of the Grandin Lumber Co., writes to the MANUFACTURERS RECORD as follows:

"The mill site and town has not been decided upon. There is a possibility of its being erected either at Lenoir or Wilkesboro, N. C., or some point on the Yadkin River. It is the intention to erect a two-band mill and resaw, planing mill and box factory, lath mill and other plants for working up by-products. It is the intention to build a mill of sufficient capacity to cut 40,000,000 to 50,000,000 annually. Machine shop and town estimated to cost, with logging railroad, \$600,000. H. C. Ladon, Lenoir, N. C., is in charge of the railroad construction. We have in the neighborhood of 800,000,000 of timber, estimated to run 60 per cent. genuine cork white pine and yellow poplar, the balance oaks, other hardwoods and hemlock. The officers of the company are: W. J. Grandin, president, Tidioute, Pa.; J. M. Hastings, vice-president, Pittsburgh, Pa.; M. K. McMullin, treasurer, Pittsburgh, Pa.; G. M. Gradin, secretary, Tidioute, Pa."

A \$150,000 Sash and Door Plant.

The Waco (Tex.) Sash & Door Co. has determined plans for the sash and door factory it has been contemplating. It will invest about \$150,000 for the buildings, machinery, etc., including lumber sheds, three-story warehouse, three-story factory building, power-house, office building and shipping sheds. Five acres of floor space will be required, and the site has been purchased. Contract for erecting the buildings has been awarded to the Southern Engineering Co. of Houston and Waco. This new plant will replace the establishment now operated by the Waco company.

Will Rebuild Big Plant.

Binswanger & Co. of Richmond, Va., will rebuild their plant for manufacturing sash, doors, blinds, etc., which was destroyed by fire last week at a loss reported to have been \$175,000. They wire the MANUFACTURERS RECORD: "Intend to rebuild as speedily as possible; likely upon present site; five stories; 100,000 square feet of floor space; mill construction; sprinkler equipment."

Arkansas Timber Land Development.

Referring to its plans, the Ozark Land & Lumber Co. of Rogers, Ark., writes the MANUFACTURERS RECORD as follows:

"It is the intention of this company to build five miles of railroad, to connect with the main line of the Kansas City & Memphis Railway Co., for the purpose of developing a large body of white oak timber land owned by this company, consisting of about 15,000 acres."

Big Timber Purchase Reported.

It is reported that F. L. Peck, president of the United States Lumber Co., Scranton, Pa., has purchased for development 200,000,000 feet of long-leaf yellow pine located in Franklin county, Mississippi, on the Mississippi Central Railroad. Mr. Peck wires the MANUFACTURERS RECORD: "As soon as all matters are consummated shall be glad to give you full particulars."

A \$600,000 Purchase.

The Pace Bros.' mill and timber properties in Santa Rosa county, Florida, have

been sold to Martin Lindsey and associates of Mobile. The price is reported as \$600,000, and the purchase includes a large sawmill at Pace, 107,000 acres of timber land rights, a 40-mile railway, 7 locomotives, etc.

Company Capitalized at \$300,000.

The Turkey Foot Land & Lumber Co. has been incorporated with \$300,000 capital stock to operate in Jackson county, Kentucky. Its incorporators are C. L. Ritter, T. T. Lovett, G. A. Koontz, M. A. Simms and E. E. Williams, all of Huntington, W. Va.

A \$500,000 Company.

The Homochitto Lumber Co. of Brookhaven, Miss., has been chartered with \$500,000 capital stock by John F. Porter, Cyrus T. Jones, F. L. Peck and associates. S. E. Moreton, president of the Central Lumber Co. of Brookhaven, writes to the MANUFACTURERS RECORD that the incorporators of the new company have purchased a large tract of timber land for development, but details as to plant, etc., have not been determined.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of publish the following extracts from recent our subscribers seeking foreign trade we letters:

Wants to Represent Manufacturers.

Raymond Toutan, 203 Rue Lafayette, Paris, France, writes to the MANUFACTURERS RECORD:

"I am interested in handling American products, and would be glad to hear from representative firms wishing to extend their connections in Europe. After several years spent in Germany, England and the United States, where I worked with the Harshaw, Fuller & Goodwin Company of Cleveland, I have opened an office in Paris. The connections I have with a great number of firms in Europe enable me to get introduced most anywhere. I have continuous connections with firms trading with the west coast of Africa, Congo, Madagascar and other colonies, and I would like to hear from American firms wishing to push the sale of tobacco, boots, hardware, tools, iron sheets corrugated, machinery for cotton, meat packing, gold mine industries, etc. I am willing to take charge of the sale of these articles on a commission basis. So far I have not carried any stock on this side of the water, but would not be unwilling to do so in case an interesting proposition should be made to me."

Wants to Represent Manufacturers.

E. Seymour Bell, care A. Windsor Richards, Army and Navy Mansions, 100 Victoria street, London, S. W., England, writes to the MANUFACTURERS RECORD:

"I have determined to make a journey to South America as manufacturers' representative. I should stay several months on the Continent, and if successful, which I have every reason to believe I should be, I should repeat the journey each year. If you can assist me in getting in touch with the right sort of people I should be much obliged. I shall write to some of your advertisers, but I think you can also be of service to me. The goods I am thinking of handling chiefly are machinery, machine tools and implements of all kinds."

"As there is a prospect of the Panama Canal being opened at no far distant date,

the present is an exceedingly favorable time to push the American trade, especially on the West Coast. I should like to be placed in communication with some large firm anxious to do a business in coal. It appears to me that your Southern producers should be able to do a very large business, and I am quite prepared to make an arrangement with one of them and push the trade. My conditions would be briefly as follows:

"Commission to be paid to me on all goods sold and exporters to subscribe a certain sum, to be agreed upon, toward my traveling expenses; exporters to put me on the most favorable terms as regards prices, etc., and supply me with such catalogues and other printed matter as may be necessary to enable me to push the business successfully. I would undertake not to represent any other firm manufacturing or exporting the same class of goods as those covered by the agreement, and would do my best to obtain orders in all the places visited. I may mention that I speak Spanish fluently, and am already acquainted with the South American markets."

Flour, Dry Goods, Shoes, Etc.

H. W. Rojer, Jr., Cutacao, West Indies, writes to the MANUFACTURERS RECORD:

"I beg to mention the following lines, manufacturers whereof I wish to come in touch with: Boots and shoes, hosiery, suspenders, prints, domestic, drills, flour, cornmeal. Should any American manufacturer desire to avail himself of my services toward pushing the sale of his line, under a commission basis, he may address himself to R. G. Dun & Co., Philadelphia Commercial Museum, Bradstreet Company, for references.

"The fields I propose covering would be, apart from this market, Venezuela, Santo Domingo, Porto Rico, Panama and Colombia."

Hardware and Household Novelties.

L. Jeunette, No. 71 Quai Coronmeuse, Liege, Belgium, writes to the MANUFACTURERS RECORD:

"My business is principally sale of small articles in the hardware line and novelties for use in the household. For these there is a heavy demand. I am always ready to push well-made and salable products of American origin in our Belgian markets, but they must be able to stand competition."

Steam Boilers, Kettles, Etc.

Fern Lippens, 33 Avenue des Germaines, Brussels, Belgium, writes to the MANUFACTURERS RECORD:

"Do me the favor of putting me in communication with builders of steam boilers and kettles, accessories, gauges, meters, counters, appliances and attachments for controlling gauges and meters."

Wilkins Trunk Factory.

Referring to its new plant, the Wilkins Trunk Manufacturing Co. of Dallas writes the MANUFACTURERS RECORD as follows:

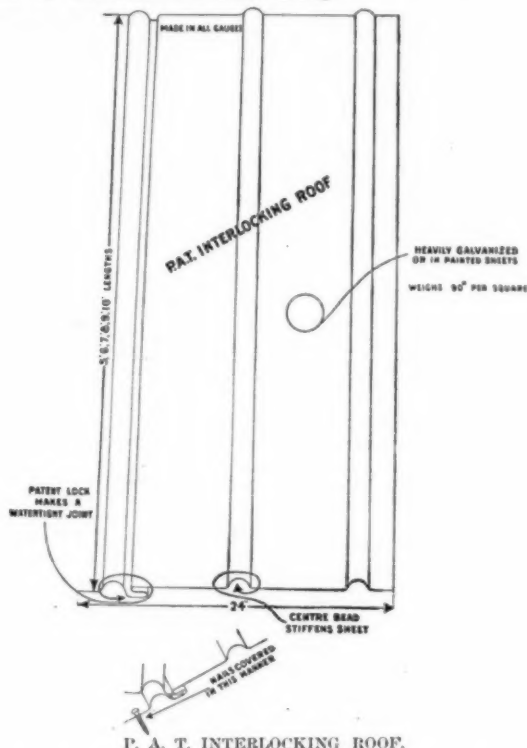
"It is built of reinforced concrete, and is as near fireproof as it is possible to make a factory building, three stories and basement, 150x50 feet, and will cost complete in the neighborhood of \$35,000. Expect to have it complete and running by the 15th of April; cost of machinery to be installed approximately \$10,000. We have already opened bids for most of the extra work concerned in this building; architects, Lang & Witchell, Dallas, Tex."

The local hardware men of Baltimore have organized with Ernest Johannessen, president; Elmer E. Englestone and J. H. Harper, vice-presidents, and Albert Zimmerman, secretary and treasurer.

MECHANICAL

P. A. T. Interlocking Roofing.

Interlocking metal roofing made of either galvanized or painted sheets and embodying a locking form which makes the roofing practically a solid piece is manufactured by the Cincinnati Sheet



P. A. T. INTERLOCKING ROOF.

Metal & Roofing Co., Cincinnati, and is called the P. A. T. interlocking roof. It is shown in the accompanying illustration. The value of the interlocking feature lies in the fact that it makes a water-tight joint, the nails are not exposed and the "Magnet" brand metal sheet used resists rust, thus eliminating one of the troubles that sometimes come from the use of metal roofs. The construction of the roof makes it practically one piece, so that there is no rattle from loose ends. The roofing is laid without any special tools. One side of the sheet is nailed down and then the nail is covered by the locking device. This locking device also provides for contraction and expansion. The sheets cover a width of 24 inches, and the roofing comes in any length from 5 to 10 feet. It has been tested under severe conditions, and it is claimed that it answers all requirements.

The Expansion of the J. I. Case Threshing Machine Co.

A fitting climax to the most successful year in the annals of agriculture was fur-



THE PLANT OF THE J. I. CASE THRESHING MACHINE CO.

nished by the J. I. Case Threshing Machine Co. of Racine, Wis., announcing that it had increased its capital stock from \$5,000,000 to \$40,000,000 and would add several new lines to its already big output of farm machinery and engines.

The details of the expansion policy and what it will include has been held in reserve by the officials of the Case company, but it is generally known that a new gas tractor will be put on the market in 1912. The Case gas engine experts have been at work on the new product for some time, experimenting and testing, and now it is claimed the new tractor is ready for marketing.

Several additions will be made to the big plant of the Case company besides those already in the course of building. The new gas tractor home will be one of the most complete in existence, and will be completed in 1912. The present plant at Racine is shown in the illustration.

Banking interests friendly to the Case company have encouraged the expansion policy, and the floating of the first \$20,000,000 of Case common and preferred stock excited little more than passing interest. The assets of the company were conceded to be many times in excess of its old capitalization, to say nothing of the world-wide influence of the Case name and the far-reaching power of its great army of 10,000 representatives in the field and its 65 branch houses all over the world.

The history of the J. I. Case Threshing Machine Co. reads like a fairy tale. Just 70 years ago the founder of the great plant, which now covers upward of 200 acres, came to Racine, Wis., from New York State. And while he has long since

passed away, his name still remains a standard trade-mark in the threshing machinery world.

The beginning of the great Case plant was small compared to its size today. It covered less than an ordinary city lot,

but improvements that the brain of J. I. Case had imbedded in his own threshing machine made it far superior to any other in use, and in the spring of 1843 the Case company began to expand, and never stopped until it is now one of the largest institutions of its kind in the world.

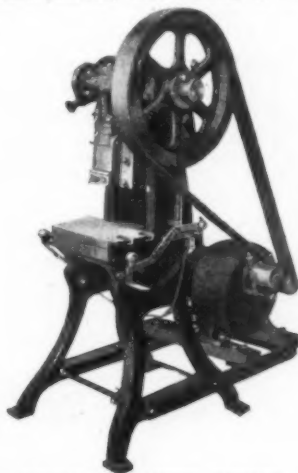
In 1897 the last reorganization of the company took place, but the name of the institution remained the same, the J. I. Case Threshing Machine Co., Inc., and the capitalization was raised to \$2,000,000. F. K. Bull was elected president and Frederick Robinson vice-president, while R. T. Robinson was chosen secretary and Chas. L. McIntosh treasurer. Later the capitalization was raised to \$5,000,000, and Charles L. McIntosh, who died, was succeeded by F. Lee Norion, the present incumbent. With the expansion policy carried out that has been determined upon the capacity of the institution will be trebled.

The latest building completed is in connection with the automobile factory, which is three stories high and has close to 100,000 square feet of floor space. The plans for the coming year call for the construction of 3000 automobiles, and these will only supply the demand of the branch houses in the different parts of the world.

The action of the Case company means that more competition than ever will be found in farm machinery circles.

The Benjamin Safety Device.

The Benjamin Safety Device, for use on stamping presses, is intended to protect the hands of the operator of stamping presses by necessitating the removal of both hands from the point of danger to trip the press before the ram starts in its downward direction. The release of either hand permits the trip to return to its normal position, thus making it impos-



BENJAMIN SAFETY DEVICE.

sible for the press to repeat unless both hands are kept on the levers until the repeat operation is begun, in which event the operator would not have time to get his hands back into danger before the operation is completed.

The device consists of an operating lever normally inoperative, although free to move downward. This lever is made operative by the action of an electro-retaining magnet through a circuit closer, located on the opposite side of the press. Consequently, the press cannot be tripped by the operating lever unless the circuit through the magnet is first closed and retained closed until after the press has been tripped.

In addition to the protective feature, the use of the device results in an increased output of work where it is necessary to bring the hand into a position of danger for handling individual pieces. The operator knows the press cannot trip until both hands are removed. The increased confidence thus created materially increases the number of operations actually performed, with a corresponding in-

crease in the amount of work done.

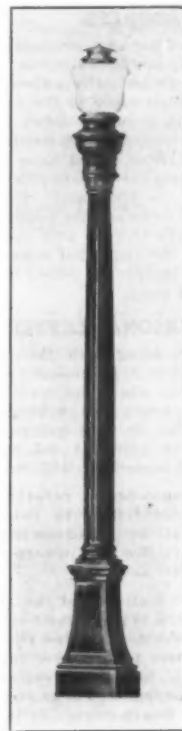
This safety device can easily be adapted to all the standard presses. No drilling of holes is necessary. The magnets are wound for 110-volt direct current, but can be used on 220-volt direct circuits by use of suitable resistance in series, or can be equipped for alternating current circuits.

For demonstrating purposes the Benjamin Electric Manufacturing Co. will furnish a sample on 30 days' trial. Further information may be secured by addressing the company at 120 S. Sangamon street, Chicago.

New General Electric Luminous Arc Lamps of High Efficiency.

The General Electric Co. of Schenectady, N. Y., offers the type of lamp herewith illustrated.

The lamp casing constitutes the capital



LUMINOUS ARC LAMP.

of the lamp-post, and is so designed that by releasing a latch it may be lowered to give free access to the lamp mechanism. Within the base of the pole an absolute cut-out is placed, so that the trimmer may disconnect the lamp from the line before starting to work on it.

The arc is struck between a stationary non-consumable copper upper electrode and a movable magnetic lower electrode burning under normal updraft conditions. A single side rod supports and carries the electrode, fume dome and chimney. The lamp is equipped with a diffusing globe which is unique, in that it is filled with light and no circular shadows are cast upon it by the electrodes. The globe may be removed without disturbing the alignment of the electrodes. By using the new specially designed diffusing opal globe, which furnishes a beautiful secondary source of pearl white light of high efficiency and low intrinsic brilliancy, it is possible to place the lamps as low as 14½ feet without producing a glare. This subject of effective street illumination is receiving the active attention of the Mayor and the Commissioner of Lighting of Baltimore at the present time, with the view to adding to the attractions of the city and in connection with the national convention next June.

Statistics just gathered by the Chamber of Commerce of Longview, Tex., show that something over \$600,000 in public and private improvements were spent there during the year just ended.

Construction Department

TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "it is reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the Manufacturers Record for three months or longer a subscription to the Daily Bulletin is included for the contract period.

BRIDGES, CULVERTS, VIADUCTS

Fla., Monticello. — Jefferson county will construct three steel bridges; bids opened February 7; E. B. Bailey, chairman Board of Commissioners. (See "Machinery Wanted.")

Ga., Atlanta. — Bridge Committee of Council awarded contract to Griffin Construction Co. of Atlanta at \$48,000 to construct steel bridge with reinforced concrete approaches at Bellwood Ave.; county agreed to build approaches and city and railroads will share cost of bridge proper. (Call for bids lately noted.)

N. C., Statesville. — Statesville Air Line Railway will construct five steel bridges of total length of 700 feet and seven small trestles. R. L. Greenlee may be addressed.

N. C., Statesville. — Iredell county will construct highway bridges during 1912; bond issue of \$400,000 authorized for highway improvement; W. S. Falls, County Engineer. (See "Machinery Wanted.")

Tenn., McMinnville. — Great Falls Power Co., F. H. Yost, general manager, First National Bank Bldg., Nashville, Tenn., has plans by Nashville Bridge Co. for 17 bridges, including bridge across Caney Fork on top of dam 110 feet high. (Recently mentioned.)

Tex., Quanah Acme & Pacific Railway Co., C. E. Ensminger, general manager, Quanah, will construct piling and frame trestle.

Va., Monterey. — P. St. J. Wilson, State Highway Commissioner, Richmond, Va., receives bids until February 3 to construct

bridge across Back Creek; plans on file with County Clerk. (See "Machinery Wanted.")

Va., Rescue. — Isle of Wight County Supervisors, Isle of Wight, Va., contemplate building drawbridge across Jones Creek.

CANNING AND PACKING PLANTS

Ala., Fairhope. — William Gomm will, it is reported, establish cannery.

Ga., Atlanta. — Georgia Interstate Development Co., Frank Weldon, president, contemplates establishment of factories to can sweet potatoes and other vegetables; also cane syrup. (See "Land Developments.")

Md., Baltimore. — Lord-Webster Company incorporated with \$25,000 capital stock by Emory W. Webster (Webster, Ford & Company, 2301 Boston St.), Louis L. Lord and Thomas P. Webster; offices at 223 Boston St.

Miss., Greenwood. — Greenwood Business League is interested in plan to establish cannery costing \$10,000; also corresponding with capitalists relative to establishing meat-packing plant.

Mo., Kansas City. — Fowler Packing Co. will erect lardhouse; cost \$75,000.

N. C., Wilson. — S. B. Rleson contemplates establishment of cannery to can tomatoes, corn, sweet potatoes and peas; capacity about 5000 cases each per season. (See "Machinery Wanted.")

Mo., St. Louis. — Krey Packing Co. will erect four-story cooler building at 2106-2112 Bremen Ave.

Tenn., Memphis. — Southern Packing & Produce Co. incorporated with capitalization of \$50,000; directors are H. E. Vernon (505 Tennessee Trust Bldg.), Ford N. Taylor and J. B. Saunders of Memphis, F. L. Wright of Horn Lake, Miss., and T. A. Hall of Whitehaven, Tenn.; will establish plant with view to increasing capacity later. (Previously noted.)

Tex., Harlingen. — Green Corn Processing Co., McAlester, Okla., is arranging to install plant to can and pack corn in the ear.

CLAYWORKING PLANTS

Ala., Gelger-Bricks. — Princess Brick & Building Co. incorporated with \$7000 capital stock by Ray Crow and others.

Mo., St. Louis. — Press Bricks. — Excelsior Press Brick Co. increased capital stock from \$10,000 to \$30,000.

S. C., Miles Mill (P. O. Station at Johnston). — Sunnybrook Brick Co. (recently noted) incorporated with \$10,000 capital stock will erect plant, installing machinery with daily capacity 50,000 to 200,000 brick; Henry F. Lee, president; Y. M. May, vice-president; Ralph H. Johnston, secretary-treasurer. (See "Machinery Wanted.")

Tex., Coleman-Bricks. — Coleman Vitified Brick Co. incorporated with \$35,000 capital stock by J. P. Morris, C. C. Frampton and C. A. Morris.

Tex., San Antonio. — Pottery. — Star Pottery Works increased capital stock from \$16,000 to \$50,000.

Va., Danville. — Bricks. — J. T. Watson Brick Corporation changed name to Watson-Fitzgerald Corporation and increased capital stock from \$20,000 to \$75,000; acquired additional land, containing shale, about 20 miles from Danville, and will develop; erect buildings; plans not determined; construction by company; machinery mainly purchased; daily capacity, 75,000 bricks; John T. Watson, manager.

COAL MINES AND COKE OVENS

Ala., Birmingham. — Franklin Coal Co. incorporated with \$5000 capital stock; B. H. Stowers, president and treasurer; W. L. Simmons, secretary.

Ky., Wofford. — Peerless Coal Co. incorporated with \$10,000 capital stock by D. O. Foley, U. S. Jones and Frank L. Smith.

Ky., Louisville. — Harlan Coal Co. incorporated with \$150,000 capital stock by Hermann D. Newcomb, F. F. Sneed, L. W. Farmer, K. U. Meguire and others, all of Louisville, Ky.; will develop 10,000 acres of coal land; estimated ultimate output, 500,000 tons annually; no coke ovens; offices in Board of Trade Bldg., Louisville. (Recently mentioned.)

Ky., Louisville. — Scanlon Coal Co. increased capital stock from \$60,000 to \$100,000.

N. C., Cummock. — Egypt Improvement Co.,

John H. Kennedy, agent, is organizing to acquire 2734 acres of land in Lee and Chatham counties on which is situated Egypt-Cummock coal mines, formerly in operation; may consider leasing mines on royalty basis. (See "Land Developments.")

Tex., Calvert. — Southwestern Fuel Co., Waco, Tex., will develop 600 acres of coal land; machinery and equipment mainly supplied; now sinking shafts, etc.; H. L. Salth, president and treasurer; Thomas D. Ross, secretary-treasurer. (Recently noted incorporated with \$60,000 capital stock at Fort Worth.)

W. Va., Marion County. — Catawba Coal Co. incorporated with \$1000 capital stock by J. M. Herpick, J. J. Buttermore, George S. Connell, George R. Horpick and R. S. Matthews, all of Connellsville, Pa.

CONCRETE AND CEMENT PLANTS

Ga., Lafayette. — Horine Development Co., Edward M. Horine, president, Atlanta, Ga., will erect cement plant with kiln capacity of 2200 to 2800 barrels of cement per day. (Previously noted. See "Mining.")

Ga., Portland. — Portland Cement. — Piedmont Portland Cement Co., Candler Bldg., Atlanta, Ga., contemplates increasing capital stock to \$300,000 to increase capacity of plant.

COTTON COMPRESSES AND GINS

Ala., Cullman. — The Jaggars Company (recently reported incorporated with \$25,000 capital stock) will establish cotton gin with capacity of 60 bales daily; now ready for bids on equipment; will let contract about October 1 for two-story 60x90-foot fireproof brick structure for merchandising; C. O. Jaggars, president; G. W. Tingle, vice-president; W. T. Jaggars, secretary-treasurer; J. S. Handley, manager. (See "Machinery Wanted.")

Okla., Bokoshe. — Choctaw Mill & Ginning Co. incorporated with \$30,000 capital stock by A. P. Gunther, Frank T. Gunther, Fort Smith, Ark.; Frank Beutelschies and Chas. Warner.

S. C., Greens. — Long Staple Gin Co. incorporated with \$3500 capital stock; D. O. Leonard, president; J. C. Smith, vice-president; W. B. De Young, secretary-treasurer and manager; will erect building; ordinary construction; install three ordinary gins and one long staple gin; cost \$3100; machinery order placed.

COTTONSEED-OIL MILLS

Okla., Bokoshe. — Choctaw Mill & Ginning Co. incorporated by A. P. Gunther and others. (See "Cotton Compresses and Gins.")

DRAINAGE AND IRRIGATION

La., St. Bernard Parish. — Kansas City capitalists purchased from Realty Investment Co. of New Orleans, La., 2500 acres wet prairie land; will reclaim and develop for farming.

Miss., Vaiden. — Commissioners Hays Creek Canal District in Carroll and Montgomery counties will construct 15½ miles of canals; Chancery Court authorized issuance of bonds and advertisement for bids.

Mo., Latour. — Johnson and Henry counties will reclaim about 9000 acres of land, subject to overflow of Big Creek, by construction of system of canals and levees; 2000 acres are in timber and 2000 acres in cultivation; main drainage canal about 13 miles long, extending from 2½ miles south and east of Latour in Johnston county to one mile south and west of Maurine in Henry county; this canal from 30 to 50 feet wide and 12 to 17 feet deep; about 30 lateral canals from 10 to 25 feet wide and 3 to 12 feet deep; estimated cost, \$94,000; R. H. & G. A. McWilliams of Chicago, Ill., have contracts for excavating 700,000 cubic yards of earth in main canal, and Johnston & Young of Blairtown, Mo., for excavation of lateral ditches; Brooks & Jacoby of Kansas City, Mo., engineers in charge.

N. C., Camden County. — Fountain Farm Co. (C. E. Sims, 821 National Bank of Commerce Bldg., and others), Norfolk, Va., will drain and cultivate 12,000 acres in Camden and Currituck counties; construct systems of canals; engineers have completed surveys for drainage; Mr. Sims and local farmers are organizing drainage district to cut main outlets for ditches; contemplate beginning work by April on main outlets,

ditches, roads and clearing on Fountain tract with superintendent and 50 laborers; will build superintendent's house, laborers' cottages, stables, sheds, etc.; will cultivate corn; company to be organized next December with \$250,000 capital.

N. C., Charlotte. — Mecklenburg County Drainage Commission, J. R. Alexander, chairman, is arranging for dredging of Irwin, Stewart and Big Sugar creeks to county line; 18 to 20 miles of dredging is proposed on Irwin and Stewart creeks; ditch 9 to 15 feet deep and 2½ to 30 feet wide is being cut. (Previously mentioned.)

Okla., Enid. — Oklahoma Sub-Irrigation Co. incorporated with George F. Southard president, J. G. Steel secretary, and Edward Cox treasurer; will control Bishop-Barr sub-irrigation system for Oklahoma.

Tenn., Selmer. — J. S. Houston, secretary, or T. B. Whitehurst, chairman, Selmer, will receive bids until January 31 to construct drainage canal in Big Muddy Bottom in southern portion of McNairy county. (See "Machinery Wanted.")

Tex., Bay City. — W. W. Woodworth, San Antonio, Tex., and associates will construct canal for Colonial Land Co.; canal will benefit several thousand acres of rice, corn and cotton lands.

Tex., Brownsville. — Cameron County Drainage District No. 2 voted bond issue of \$105,620 for construction of drainage system. Address District Commissioners. (Recently mentioned.)

Tex., Cotulla. — N. G. Simpson and associates are having preliminary surveys made for proposed dam across Nueces River, seven miles north of Cotulla; reservoir to contain water for irrigating 70,000 acres; water to be distributed from reservoir by gravity to canals; proposed to extend canal 18 or 20 miles east of Cotulla into section recently penetrated by Fowler extension of Uvalde & Capital City Railroad.

Tex., Del Rio. — Val Verde County Reservoir & Irrigation Co. (officers not elected; D. B. Chapin, Brownsville, Tex., interested) is promoting previously-noted enterprise. C. S. Young Company, 501 Frost Bldg., San Antonio, Tex., advises Manufacturers Record its (C. S. Young) company is increasing force preparatory to hurrying to completion preliminary survey on this ("Devils River Irrigation") project.

Tex., Orange. — Precincts Nos. 1 and 2 of Orange county contemplate voting on \$30,000 bond issue for construction of drainage system. Address County Commissioners.

Texas. — Geo. Bodett and Alfred Ridder are owners of earth dam across Long Hollow Canyon (branch of Medina River), contract recently noted let to J. B. Kelly & Son; owners will irrigate to develop pecan orchards.

Tex., Raymondville. — Union Irrigation District voted to issue \$100,000 of bonds in connection with construction of irrigation canal to bring water from Rio Grande to irrigate 55,000 acres of farming land.

Tex., San Benito. — Cameron County Commissioners approved report submitted by County Surveyor Amthor on San Benito Drainage District; district will vote February 3 on \$452,000 bond issue for construction of drainage system.

ELECTRIC PLANTS

Ala., Ashland. — Ashland Oil Mill & Fertilizer Co. will install electric-light plant.

Ga., Americus. — Americus Gas & Electric Co. applied to Georgia Railroad Commission for authority to issue \$250,000 stock and \$300,000 bonds for extension and improvements.

Ga., Atlanta. — Atlanta Terminal Station Co., C. E. Johnson, chief engineer, ordered additional 150 K. W. machines, engine and boiler for furnishing power and lights for freight station when completed; cost of equipment about \$25,000; machines will furnish direct current of 220 volts, with high-speed automatic engines.

Ga., Atlanta. — Merchants' Electric Co. is being organized to establish 300 K. W. electric plant to furnish lighting for four department stores.

Ga., Columbus. — Columbus Railroad Co., John S. Blecker, manager, will extend electric system.

Ga., Helena. — City will construct electric-light plant; awarded contract to J. B. McCrary & Co., Atlanta, Ga.

Ga., McDonough. — City granted 50-year fran-

chase to J. G. Smith to construct electric light plant; construct dam across Cotton River, about seven miles from McDonough, La., New Orleans.—Crescent Electric Co. incorporated with \$3000 capital stock; Frank Gaschek, president and treasurer; James W. Maloney, vice-president; James M. Maloney, secretary.

Md., Baltimore.—Baltimore County Electric Co. petitioned Public Service Commission for authority to acquire electric property of Baltimore County Water & Electric Co., of which Albert H. Wehr is general manager, 100-102 W. Fayette St.; consideration \$571,000, of which \$221,000 will be in bonds and \$150,000 in stock.

Md., Baltimore.—Consolidated Gas Electric Light & Power Co., Calvert and Baltimore Sts., planning to purchase electrical division of Baltimore County Water & Electric Co., 100 W. Fayette St.; details being considered.

Mo., Cumberland.—City Council voted to install electric-light plant for commercial and public lighting purposes when new Britts Creek water supply system has been completed; George G. Young, Mayor.

N. C., Littleton.—City receives bids until P. M. February 15 for construction of recently-noted electric-light plant. Address T. J. Miles, Mayor, or C. E. Fairbanks, consulting engineer, 417 American National Bank Bldg., Richmond, Va., for information. (See "Machinery Wanted.")

N. C., Durham.—George L. Lyon is promoting organization of company to retail electricity from transmission of Southern Power Co. of Charlotte, N. C.

N. C., Gastonia.—City contemplates voting on \$5000 bond issue for electric-light plant. Address The Mayor.

N. C., Kenilworth (not a postoffice).—Kenilworth Development Co. (J. M. Chiles, Asheville, N. C., and others) contemplate constructing electric-light plant. (See "Land Development.")

Okla., Muldrow.—City voted \$33,000 for constructing water-works and transmission line from Fort Smith, Ark., to Muldrow for furnishing power for pumping station and electricity for street lighting; contract let to F. R. Stone, Lima, O.; Western Engineering Co., 703 American National Bank Bldg., Oklahoma City, Okla., designing and consulting engineer; J. W. Coker is president of board; E. A. Miller, clerk. (Recently incompletely mentioned.)

Okla., Porum.—Township awarded contract to Kennedy & Fleming, Oklahoma City, Okla., to construct electric-light plant and water-works; cost \$33,000; M. A. Earl & Co., engineers in charge, 725 Flynn-Ames Bldg., Muskogee, Okla. (Recently noted.)

Tenn., Lexington.—City will expend \$50,000 to construct electric-light plant with 125 K. V. A. lights, three-quarters of a mile of sewers and water-works of 150,000 gallons capacity; will advertise for bids; R. C. Houston, engineer in charge, 1634 Exchange Bldg., Memphis, Tenn. (Recently noted. See "Machinery Wanted.")

Tex., Dallas.—Texas Electric Co., J. V. Watkins, president, 304 Scollard Bldg., is holding company and will take over plants in connection with construction of interurban railway. (Recently noted incorporated with \$100,000 capital stock.)

Tex., Winters.—Winters Light & Power Co. will increase capital stock from \$7500 to \$10,000 and enlarge plant.

W. Va., Wheeling.—Wheeling Traction Co., G. O. Nagle, manager, will enlarge South Side power plant.

FERTILIZER FACTORIES

Ga., Atlanta.—Winder Guano Co. incorporated with authorized capital stock of \$20,000 by John W. Millsaps, Alexander W. Smith and Gordon Hiles.

Ga., Fitzgerald.—Farmers' Warehouse & Fertilizer Co. incorporated with \$25,000 capital stock by C. A. Newcomer, August Demmel, James Fletcher, Elbert Paulk and others.

Ga., Savannah.—Swift Fertilizer Works, 911 Prudential Bldg., Atlanta, Ga., is equipping for fertilizer mixing a large rented warehouse on Pier 3, Hutchinson Island; capacity about 12,000 to 15,000 tons; administration through Atlanta office.

Ga., Warrenton.—Union Fertilizer Co. incorporated with \$10,000 capital stock by J. C. Evans (cashier Planters and Merchants' Bank), Warrenton; W. E. Markwalter of Warrenton and Athens, Ga., and others.

FLOUR, FEED AND MEAL MILLS

Ark., Little Rock.—Lawrence W. Long Milling Co. incorporated with \$50,000 capital stock by Lawrence W. Long, E. L. Bost, J. B. Bateman and others.

Mo., St. Louis.—Clinton Milling Co. incorporated with \$50,000 capital stock by William H. Steele, James Holland and Frank B. Coleman.

N. C., Southmont.—Southmont Milling Co., G. T. Feezor, president, will erect two-story 30x40-foot mill building; local labor; placed order for roller and feed mills machinery; products, flour, meal and feed. (See "Machinery Wanted.")

Okla., Muskogee.—Muskogee Roller Mill Co. incorporated with \$10,000 capital stock by W. N. Patterson, George W. Duncan and Levi Ackley.

Tenn., Ashwood.—Ashwood Roller Mills incorporated by John A. Jones, O. L. Jones, R. H. Jones, J. O. Walker and E. L. Armstrong.

FOUNDRY AND MACHINE PLANTS

Ala., Birmingham.—Radiators.—American Radiator Co., Chicago, Ill., referring to recent report it will build \$1,000,000 plant, wires Manufacturers Record as follows: "Nothing will be done in Birmingham for more than a year."

Ala., Samson.—Machine Shop.—Nantz Ice & Bottling Co. (J. H. Nantz interested) is erecting machine shop. (See "Ice Plants.")

Ark., Jonesboro.—Bridge Tools.—Arkansas Bridge & Construction Co. will establish plant to manufacture material and tools for building steel bridges for rivers and drainage ditches.

Ga., Rome.—Mill Supplies, etc.—Georgia Supply & Machinery Co. has changed name to Standard Supply & Machine Co.; capital

Plow Co. is being organized with \$100,000 capital stock by F. L. L. and Joseph Ezell to manufacture plows, tools, etc.

Tex., Fort Worth.—Brass and Machinery.—Utica Brass & Machine Co. incorporated with \$5000 capital stock by J. M. Bird, F. L. Lightfoot and R. L. Coy.

Tex., Fort Worth.—Pumps.—Crescent Pump Works, 711 First National Bank Bldg., will open bids about July or August to erect building; plans not made; machinery mainly purchased; daily capacity, one to three pumps; W. W. Manning, president; W. T. Pittman, vice-president and manager; G. E. Cranz, secretary; R. Vickery, treasurer; recently noted incorporated with \$10,000 capital stock. (See "Machinery Wanted.")

GAS AND OIL DEVELOPMENTS

Ala., Anniston.—J. P. Macon is interested in development of oil property in Anniston district.

Ala., Anniston.—William H. Zinn is promoting development of oil deposits in Anniston district.

Okla., Bartlesville.—Dallas Oil & Gas Co. incorporated with \$50,000 capital stock by D. W. Moorehead of Bartlesville; W. H. Ford, of Sulphur, Okla.; Arthur P. Duggan of Dallas, Tex.; W. R. Brents of Sherman, Tex., and others.

Okla., McAlester.—Central Gas Co. incorporated with \$200,000 capital stock by W. H. Johnson, L. A. Rowland and James A. Venable, all of Bartlesville, Okla.

Okla., Muskogee.—Oklahoma Oil & Gas Co. incorporated with \$30,000 capital stock by

Tex., Floyd.—Floyd Oil Co. incorporated with \$50,000 capital stock by H. M. Mathews, L. B. Rose and W. C. Smith.

Tex., Beaumont.—Lee Oil Co. incorporated with \$5000 capital stock by John A. McShane, Leon Sonfield and George W. Brown.

Tex., Henrietta.—Gas.—City Council granted 25-year franchise to Citizens' Gas Co. to construct system of mains, etc., to supply city with natural gas for lighting, heating and manufacturing purposes. (Company recently reported incorporated under "Miscellaneous Factories" with \$50,000 capital stock by A. B. Edwards and others.)

W. Va., Wheeling.—Schenk Philadelphia Natural Gas Co. chartered with \$1,500,000 capital stock by Albert F. Schenk, Charles J. Schenk, George P. Folmar, Willis H. Marshall and Allard P. Doepken; plans to develop gas properties and establish plants at Warwood, suburb of Wheeling, and other cities; New York and Philadelphia capitalists interested; offices at 1123 Market St., Wheeling.

ICE AND COLD-STORAGE PLANTS

Ala., Samson.—Nantz Ice & Bottling Co. has purchased equipment for 30-ton ice plant; also for bottling works and machine shop; construction begun; investment between \$40,000 and \$50,000. (Mr. Nantz and associate recently noted as purchasing planing mill to be converted into ice plant.)

Ark., Earl.—Earl Public Service Co. will install 10-ton ice and cold-storage plant; bids received by George Company, 526 Randolph Bldg., Memphis, Tenn., until noon January 26 for machinery and equipment; Bradshaw-Ward Company, advisory refrigerating engineers, 51 Linden Ave., Memphis.

Ark., Little Rock.—J. W. Lippincott has plans by J. M. Whitehead, Little Rock, for plant; 60x150 feet; construction by owner; has placed order for machinery; daily capacity, 50 tons of ice.

Ga., Fort Valley.—Atlantic Ice & Coal Corporation, E. E. Engan, general manager, Atlanta, Ga., will erect ice plant; capacity, 50 tons; brick building; equip ice storage rooms; cost \$25,000.

La., Shreveport.—Independent Ice & Cold-Storage Co. organized with \$50,000 capital stock; establish ice plant with daily capacity of 80 tons; S. J. Harmon, president.

Mo., Mexico.—Glacier Ice Co. chartered with \$200,000 capital stock by R. V. Montague, R. H. Phillips and E. L. Cass of Mexico and J. W. Bedford of Omaha, Neb.

Okla., Hugo.—Hugo Ice & Light Co. (recently noted to enlarge plant) has purchased 30-ton ice machine; daily capacity, 25 to 45 tons of ice.

Okla., Marietta.—Welch Bros., Chanute, Kas., will establish ice plant.

W. Va., Williamson.—Citizens' Ice & Bottling Co. incorporated with \$20,000 capital stock by Mark H. Russell, J. A. Goodman, F. P. Jennings, M. P. Meek and James Damron.

IRON AND STEEL PLANTS

Okla., Sand Springs.—Rolling Mill.—Pioneer Iron & Steel Co. incorporated with \$75,000 capital stock by Benjamin F. Rice and C. B. Farquharson of Tulsa and J. H. Kerwin of Gary, Ind.; will erect 85x250-foot building of iron and steel construction; install machinery to roll steel products; equipment purchased; Samuel E. Light (until recently of Lebanon, Pa.) is managing director.

LAND DEVELOPMENTS

Ala., Birmingham.—St. Clair Farms Co. incorporated with \$6000 capital stock; S. P. Marsh, president; F. P. Utting, vice-president; W. E. Putnam, secretary-treasurer.

Ala., Gadsden.—Glenwood Land Co. will develop 250 acres near Gadsden for trucking purposes; divided property into five-acre tracts and will sell; establish offices in Gadsden.

Ala., Greensboro.—Alabama Realty Co., 814 1/2 Quarrier St., Charleston, W. Va., will develop 3000 to 10,000 acres of land in Hale county as subdivision for small farms; R. L. Walker, president; Bradford Noyes, vice-president; R. A. Young, secretary-treasurer. (Recently noted incorporated with \$50,000 capital stock at Charleston, W. Va.)

Ala., Robertsdale.—Princeton Plantation Co. incorporated with \$12,000 capital stock to grow tobacco; Roger W. Phelps, president; Elmer Sapp, vice-president; H. H. Trimble, secretary; Charles G. Cashin, treasurer.

Ark., Prescott.—Prescott Planting Co. incorporated with \$5000 capital stock; W. N. Bamsis, president; M. L. Moon, vice-presi-

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stock, \$25,000, with privilege of increasing to \$100,000; will not take over property of Georgia Foundry & Machine Co., as previously stated; William H. Fickling is manager.

Ky., Louisville.—Stoves.—Bridgeford & Co. purchased 29 electrical motors having aggregate of 300 horse-power to operate stove foundry.

Mo., Baltimore.—Filling, Weighing, etc., Machinery.—Lewis M. Keizer (306 N. Holliday St.), John H. Windfelder, Daniel C. Amundson and others will organize \$750,000 corporation to manufacture Heybach machinery to fill, weigh, pack and cap articles sold in cartons, cans or packages; Mr. Keizer will be president.

N. C., Fayetteville.—Plows.—Ward's Plow Works, Thomas Ward, proprietor, will erect foundry shed; 30x100 feet; operated by gasoline engine; cost \$1500.

N. C., Fayetteville.—Plows.—Thomas Ward will rebuild burned plow factory.

N. C., Taylorsville.—Corn Mill.—Carson & Hubbard are promoting establishment of plant to manufacture patented corn mill.

Okla., Guthrie.—Castings, etc.—Southwestern Iron Works, Chas. H. Martindale, president, is reported as to enlarge plant.

Okla., Tulsa.—Gas Engines.—Pattin Bros. Company, Marietta, O., will, it is reported, establish plant to manufacture gas engines.

Tenn., Memphis.—Steel Trucks.—Pressed Steel Truck Co. chartered with \$250,000 capital stock by Pinckney A. Wood and Henry Caro of Memphis and Dewitt E. Griswold of New York.

Tenn., Nashville.—Plows.—Ezell Scientific

J. M. Postelle and Fred P. Branson, Muskogee, and J. S. Alexander, Oklahoma City, Okla.

Okla., Okmulgee.—Wade Oil Co. incorporated with \$15,000 capital stock by L. S. Skelton and J. D. Bedford of Okmulgee and Wade S. Stanford, Sapulpa, Okla.

Okla., Oklahoma City.—Sanitas Oil Co. incorporated with \$3000 capital stock by F. E. McLaughlin, J. A. McLaughlin and J. E. Moyer.

Okla., Ponca.—Ponca Oil Co. incorporated with \$25,000 capital stock by L. H. Wentz, E. W. Marland and B. L. Hobb.

Okla., Tulsa.—Sunset Oil & Gas Co. incorporated with \$16,000 capital stock by W. E. Gordon, John D. Porter, J. R. Ewing, W. U. Crockett and J. D. C. Porter.

Okla., Tulsa.—Waterside Oil & Gas Co. incorporated with \$10,000 capital stock by G. R. McCullough, C. S. Avery, Thomas Gilcrease and others.

Tex., Atlanta.—Bloomberg Oil Co. incorporated with \$10,000 capital stock by P. C. Willis, J. B. Simmons, G. W. Faht and others.

Tex., Albany.—Albany Natural Gas Co. incorporated with \$10,000 capital stock by John F. Sedgwick, W. G. Webb, P. K. Deats and F. B. Cloud.

Tex., Beaumont.—Twenty-five Oil Co. incorporated with \$4000 capital stock by J. B. Moore, W. G. Boles and W. Greaves.

W. Va., Clarksburg.—Virginia Development Co. incorporated with \$10,000 capital stock by H. A. Harman, A. D. Harman, B. W. Bahyan, W. G. Terrell and H. B. Lee, all of Bluefield, W. Va.

dent; Thomas C. McRae, Jr., secretary-treasurer.

Ark., Little Rock.—Manning Place Land Co. incorporated with \$45,000 capital stock by M. J. Manning, D. A. Gates and H. H. Kirby.

D. C., Washington.—National Land & Development Co. incorporated with \$50,000 capital stock by Thomas H. R. Clarke (914 W. St. N. W.), J. J. Jackson and R. J. Harlan.

Fla., Jacksonville.—Jacksonville Pine Co. is being organized to take over 21,000-acre tract of land (about 10 miles from Jacksonville) recently noted purchased by James A. Mandeville and Edward Adams of Newark, N. J.; plans extensive improvements, developing portion as townsites and another portion as pecan orchard.

Ga., Atlanta.—Georgia Interstate Development Co. incorporated with \$25,000 capital stock and authority to increase to \$500,000 by Geo. C. Walters, Frank Weldon and others; Mr. Weldon to be president. Mr. Walters wires Manufacturers Record that the company proposes to develop and sell farm lands and town property; acquired agricultural lands in sea island cotton belt, these to be first developed; New York and Georgia parties interested; canning factories for packing sweet potatoes, other vegetables and Georgia cane syrup will be established.

Ga., Augusta.—Hackett & Bell purchased property from Augusta Land Co.; will improve as residential suburb.

Ga., Lafayette.—Horne Development Co., Edward M. Horne, president, Atlanta, Ga., will develop 6000 acres of land in Walker county; establish cement, lime and crushed-stone plants; also develop for agriculture. (See "Mining.")

Ga., Milledgeville.—Edwards & Patterson will enlarge pecan nursery; arranged for planting 200 pounds of pecans.

La., Genesee.—Genesee-Louisiana Land Co. organized by Genesee Lumber Co. (land department), Genesee, La.; John R. Galey, Chicago, Ill., and others to colonize with Northern farmers from 30,000 to 37,000 acres of cut-over pine lands; in center of property it is planned to establish townsites to be called Jessica and 80-acre experimental farm; F. C. Lorange, in charge of land department of lumber company, has been authorized by Police Jury of Tangipahoa parish to construct road six miles long, extending east and south from Independence, La.; Mr. Galey will be in charge of Chicago office at 1254 First National Bank Bldg.; New Orleans office will also be maintained.

La., New Orleans.—Orleans Plantation Co. incorporated with \$50,000 capital stock; Jos. Maumus, president; Louis Payse, vice-president; Alexander P. Perrin, secretary-treasurer.

Md., Bladenburg.—Southern Maryland Land & Improvement Co. purchased Lowndes estate, consisting of 80 acres, and will develop; J. Spence Howard, engineer, 11 E. Lexington St., Baltimore, has been engaged to make surveys; grading, improving of streets, etc., will be started in early spring.

Miss., Clarksdale.—Silver Creek Co. incorporated with \$30,000 capital stock by Earl Brewer, E. A. Dalton, T. B. Watkins and others.

Mo., St. Louis.—Cornell-Miller Texas Farms Co. incorporated with \$5000 capital stock by Robert H. Cornell, Grant Richardson and others.

N. C., Camden County.—Fountain Farm Co. (C. E. Sims, 921 National Bank of Commerce Bldg., and others), Norfolk, Va., contemplates corn cultivation on 12,000 acres in Camden and Currituck counties. (See "Drainage and Irrigation.")

N. C., Charlotte.—H. C. Dotger and others will develop 100 acres as residential section; American Trust Co. is trustee.

N. C., Cummock.—Egypt Improvement Co. incorporated with \$30,000 capital stock; president, John B. Lennig, Bridesburg, Philadelphia, Pa.; vice-president, John L. Tuill, Hemp, N. C.; secretary-treasurer, John H. Kennedy, Cummock; company will organize and own 2734 acres of land on both sides of deep river in Lee and Chatham counties; Egypt-Cummock coal mines are on these lands and part of purchase; farming development contemplated. (See "Coal Mines and Coke Ovens." See "Machinery Wanted.")

N. C., Kenilworth (not a postoffice).—Kenilworth Development Co. incorporated with \$25,000 capital stock; purchased from Kenilworth Land Co. site of Kenilworth Inn (previously burned) and 200 acres adjoining; will establish club colony, construct artificial lake and erect cottages; Kenilworth Inn Co. (subsidiary company) will erect \$250,000 hotel; officers of development company are B. C. McVey, president, Grand Rapids,

Mich.; J. J. McCloskey, secretary, Asheville, N. C.

N. C., Mt. Airy.—North Carolina Apple & Live Stock Co., J. B. Sparger, president, organized with \$125,000 capital stock; will develop 1200 to 1500 acres of orchard property about three miles north of Mt. Airy; bids opened for improvements in early spring; cost \$12,000.

Okla., Davis.—Davis-Arbuckle Development Co. incorporated with \$250,000 capital stock by E. A. Hill, C. B. Ramsey and C. C. Richer.

Okla., Hugo.—Kismitch Development Co. incorporated with \$2000 capital stock by J. J. Barrett, H. T. Layne, Claude P. Spriggs and Nellie C. Barrett.

Okla., Hobart.—City has purchased and will develop 80 acres of land for park purposes. (Bond issue of \$100,000 recently reported voted for parks, etc.)

Okla., Lawton.—The Industrial Company incorporated with \$150,000 capital stock by George Boone, Guy C. Robertson, Louis Mendlick, R. D. Morford and others.

Okla., Muskogee.—City contemplates additional bond issue of \$100,000 for park purposes; contemplates purchasing 60 acres of land within city limits and two mountains known as Fern Mountain and Brushy Mountain several miles from city. D. H. Middleton, Mayor.

Okla., Okmulgee.—University Heights Co. incorporated with \$10,000 capital stock by W. Thornburg, Vin Truman and W. T. Foley.

S. C., Columbia.—South Carolina Land & Improvement Co. incorporated with \$10,000 capital stock by W. T. Andrews, R. W. Westberry and J. H. Goodwin.

S. C., Columbia.—W. D. Simpson and W. J. Taylor purchased property on Elmwood Ave. for \$20,000; proposes to divide into sites for residences.

S. C., Dillon.—Dillon Farming Co. incorporated with \$1000 capital stock by F. L. Wood and J. N. Rowland.

S. C., Gaffney.—Whig Hill Land Co. incorporated with \$10,000 capital stock; J. A. Carroll, president; J. E. Jeffries, secretary-treasurer.

S. C., St. George.—M. S. Connor Land Co. incorporated by M. S. Connor, P. L. Moore and S. L. Connor.

Tenn., Chattanooga.—City will probably soon vote on proposed \$250,000 bond issue for building of park system. Address The Mayor.

Tenn., Memphis.—City purchased Montgomery Park for \$250,000 and will expend \$25,000 in improving grounds and erecting buildings; park will be used as public playground and permanent site for Tristate Fair. E. H. Crump, Mayor. (City previously reported as having voted \$275,000 bond issue.)

Tenn., Memphis.—Normal Land Co. is incorporated with \$7000 capital stock by W. T. Braun, Ben Goodman, J. J. McNulty, G. C. Johnson and J. C. Adams.

Tenn., Memphis.—Chickasaw Farms incorporated with \$30,000 capital stock; J. C. Hardy of Mississippi is president, John E. Lippitt vice-president, I. L. Bialack secretary-treasurer.

Tex., El Paso.—Webb Farm Co. incorporated with \$30,000 capital stock by M. H. Webb, F. C. Knollenberg and Charles R. Loomis.

Tex., Galveston.—L. T. Erickson purchased 123 acres of Highland Park property between Texas City Junction and La Marque for \$21,000; organizing company with \$30,000 capital stock to develop residential suburb; improvements will include grading and shelling streets, building concrete sidewalks, drilling artesian well and erection of water tower.

Tex., Orange.—W. H. Stark, E. W. Brown and George E. Holland purchased 15,000 acres of cut-over timber lands for \$100,000; will colonize.

Va., Rockymount.—American Apple Co., C. Louis Allen, president, Washington, D. C., purchased 1600 acres land for development as high-grade apple orchard; will sell interests, company continuing to manage and operate.

W. Va., Martinsburg.—Thomas Orchard Co. incorporated with \$15,000 capital stock by E. C. Henshaw, Wilbur H. Thomas, Millicene R. Thomas and others.

W. Va., Martinsburg.—New Home Realty Co. incorporated with \$5000 capital stock by J. T. Bladenbousch, E. C. Henshaw, Wilbur H. Thomas and others.

W. Va., Rada.—Chert Mountain Orchard Co. is developing 1068 acres of fruit lands; has planted 11,000 apple and 41,500 peach trees; when completed there will be 90,000 peach trees of several varieties; George T. Leatherman, president; E. A. Leatherman, secretary-treasurer; cost of improvements

\$25,000. (Recently reported incorporated with \$75,000 capital stock.)

LUMBER MANUFACTURING

Ark., Rogers.—Ozark Land & Lumber Co., George D. Locke, president, will develop about 15,000 acres white oak timber land owned by company; in connection will build five miles of railroad; plans not fully matured.

Fla., Idella.—E. C. Jordan, Olga, Fla., will erect sawmill recently noted; mill construction; 30x100-foot building; cost \$3000; plans and construction by owner; install sawmill machinery, etc. (See "Woodworking Plants." See "Machinery Wanted.")

Ga., Atlanta.—Gate City Lumber Co. incorporated with \$5000 capital stock by Frank and T. S. Crapp.

Ga., Macon.—Tomlinson Land & Timber Co. incorporated with \$100,000 capital stock by B. P. O'Neal, E. J. Willingham and others to manufacture lumber and naval stores; controls about 9000 acres of land in Baker county; portion in timber and portion open for cultivation; later, land will probably be divided into tracts and colonized. (Recently noted.)

Ky., Covington.—McDannold Lumber Co. incorporated with \$20,000 capital stock by Charles F. Droege, E. A. Sanders and E. J. Droege.

Ky., Jackson County.—Turkey Fork Land & Lumber Co. incorporated with \$300,000 capital stock by C. L. Ritter, T. T. Lovett, G. A. Koonts and others, all of Huntington, W. Va.

Ky., Louisville.—Milliken & Aldridge, Jackson, Ky., purchased mill of Ohio Valley Tie Co.; will enlarge and improve; contemplate erecting another sawmill.

Miss., Braxton.—Joe Haney will erect sawmill.

Miss., Brookhaven.—Homochitto Lumber Co. chartered with \$500,000 capital stock by John T. Porter, Cyrus T. Jones, F. L. Peck and others; purchased large tract of timber land; will erect plant; plans not determined.

Miss., Estabatchie.—R. B. Gunn Lumber Co. purchased 1000 acres timber land; also purchased and will install sawmill equipment which will nearly double present capacity of plant.

Miss., Franklin County.—F. L. Peck, president United States Lumber Co., Scranton, Pa., is reported to have purchased 200,000,000 feet of long-leaf yellow pine on Mississippi Central Railroad for development; he writes Manufacturers Record: "As soon as all matters are consummated shall be glad to give you full particulars."

Miss., Georgetown.—Consolidated Lumber Co., Indianapolis, Ind., will, it is reported, erect planing mill; minimum capacity, 100,000 feet per day; cost about \$40,000.

Miss., Hattiesburg.—Harrison-Cochran Lumber Co., C. W. Cochran, president, will rebuild planing mill; 300x40 feet; install two matchers, rip and cut-off saw, fan and knife grinder, etc.; daily capacity, 20,000 to 30,000 feet of lumber. (Recently reported burned.)

Miss., Knoxville.—Swift Lumber Co. will erect sawmill with daily capacity 65,000 feet.

Miss., Magee.—A. Tindale will, it is reported, erect sawmill.

Miss., Smedes.—R. E. Walter will erect 30x140-foot building; ordinary tar paper construction; machinery purchased; daily capacity 20,000 feet of hardwood lumber. (Recently noted to have purchased 4000 acres of timber land.)

Mo., Altenburg.—Meisner Lumber & Manufacturing Co. incorporated with \$850,000 capital stock by M. D. Meisner, B. M. Hemmann, G. Grebing and others.

Mo., Princeton.—Fuller Lumber Co. incorporated with \$50,000 capital stock by J. E. Fuller, M. E. Fuller and C. W. Alley.

N. C., Greensboro.—South Atlantic Lumber Co. will erect 50x175-foot addition to planing mill; construction by company; install 150-horse-power high-pressure boiler and 125-horse-power engine; also two large planers and additional trim saw and edger; total cost \$7000; daily output three to four cars of dressed lumber. (Recently noted to double capacity.)

N. C., Lenoir.—Grandin Lumber Co. (previously noted to develop 60,000 acres of timber land) contemplates erecting two-band mill, resaw and planing mill, box factory, lath mill and other plants for working up by-products; has 800,000,000 feet of timber; annual capacity of mill, 40,000,000 to 50,000,000 feet of timber; cost of machine shop, logging railroad, etc., \$600,000; H. C. Landon of Lenoir, engineer in charge of railroad construction; W. J. Grandin, president; G. M.

Grandin, secretary, both of Tidluite, Pa.; J. M. Hastings, vice-president; M. K. McMullin, treasurer, both of Pittsburgh, Pa.; main office, Tidluite, Pa.

S. C., Orangeburg.—C. P. Lesosne secured option on 2000 acres timber land; contemplates development; purchase price to be \$90,000.

Tenn., Chattanooga.—R. L. Moore and others will build creosote and shingle-plant.

Tenn., Memphis.—John M. Woods Lumber Co. incorporated with \$30,000 capital stock by E. D. Walker, D. D. Nellis, H. A. Hale and others.

Tenn., Nashville.—Dunlap Lumber Co. increased capital stock from \$25,000 to \$50,000.

Tenn., White Bluffs.—Interstate Coopers Co., Dickson, Tenn., purchased standing timber 10 inches in diameter across stump on 4500 acres near White Bluffs.

Tex., Dallas.—Trinity Lumber Co. incorporated with \$35,000 capital stock by Louis Lipsitz, W. T. Harris and G. B. Foster.

Va., Guinea.—W. S. Embrey, Inc., Fredericksburg, Va., acquired 6,000,000 feet pine and poplar lumber and tie and hardwood timber on property of W. P. Waite of Guinea, Va.; consideration about \$80,000; company states several additional tracts also purchased, and all contracts for manufacturing and handling have been let to operators of portable mills.

Va., Pulaski.—Stone-Huling Lumber Co., J. A. Stone, president, Bristol, Va.-Tenn., will enlarge plant; erect buildings and sheds and install planing mill.

Va., Williamsburg.—Edward May, Norfolk, Va., purchased 463 acres timber land; reported purchase price, \$8000.

W. Va., Glenray.—Glenray Lumber Co. incorporated with \$110,000 capital stock by S. W. Wilson, I. M. Shannon, H. F. Stratton and Theodore L. Wilson of Clarion, Pa.; M. I. McCreight and B. M. Marlin of Dubois, Pa.; J. M. Young, Pittsburg, Pa., and others.

W. Va., Point Pleasant.—Larne-Swisher Lumber Co. incorporated by Isaiah W. Larue, Samuel W. Swisher, Della Larue, Esther Swisher and H. R. Howard.

METAL-WORKING PLANTS

S. C., Bishopville.—Metal Signs.—C. A. Devine is considering establishment of plant to manufacture metal signs; location not decided.

MINING

Ark., Sevier County.—Antimony.—Southwest Mining & Smelting Co., George B. Hall, president, 608 Wilder Bldg., Rochester, N. Y. (capitalized at \$500,000), will develop antimony deposits; wires Manufacturers Record: "About 500 acres; expect to produce 40 tons daily; cost of reduction plant \$50,000."

Ga., Lafayette.—Lime, etc.—Horne Development Co., Atlanta, Ga., will develop 6000 acres of mining and agricultural land in Walker county; plans immediate erection of cement, lime and crushed-stone plants; later to have daily capacity for 2300 tons of crushed stone with subsequent addition of several No. 6 crushers, increasing daily capacity to 8000 tons; daily capacity of cement plant, 2200 to 2800 tons; lime plant to have 75 tons daily capacity; Edward M. Horne, president; H. L. DeGlive, vice-president; E. Lee Worsham, secretary; S. A. Hunt, Jr., treasurer, all of Atlanta. (Previously noted incorporated with \$200,000 capital stock and privilege of increasing to \$1,000,000.)

La., Vinton.—Sulphur.—South Sulphur, Mineral & Oil Co. organized and purchased 500 acres for development; will drill for sulphur, oil, etc.; organized by J. S. Brady, D. C. Wells, Ed Kerwin and others of 70 Common St., New Orleans, La.

Mo., Carthage.—John A. Eckman, Henry Muehling, William Roper and Jerry Eastridge will develop lead and zinc lands; has lease on 35 acres; will erect mill.

Mo., Sarcosie.—Lone Pilgrim Mining Co., A. M. Bramer, president, will develop 20 acres of land; Henry C. Wheeler, Joplin, Mo., engineer in charge; will install rock-crushing machinery to cost \$15,000; contract let. (Recently noted.)

Mo., Webb City.—Lead and Zinc.—Twin Grove Mining Co. incorporated with \$50,000 capital stock by Charles T. Orr, J. W. Weaver, Otto J. Gosh and George J. Kauter, all of Webb City, and Charles R. Guinn, Carthage, Mo.

Okla., Bickford.—Gypsum.—Roman Gypsum Co. incorporated with \$100,000 capital stock by A. C. Enoch, Oklahoma City; I. C. Enoch, Jackson, Miss.; Charles N. Bancroft, Bickford.

Tex., Leander—Limestone.—R. B. George Company, Austin, Tex., will develop 1200 acres of limestone property; equipment will include quarry machinery, boilers, engines and derricks; cost \$15,000; considering installation of pulverizing plant and limekilns; R. B. George, president; Lee H. Hulet, manager. (See "Machinery Wanted.")

Tex., Stamford—Sulphur.—S. M. Swenson & Sons, 37 Wall St., New York, wire and write Manufacturers Record outlining plan to develop Texas sulphur; they and associates purchased 10,000 acres, including sulphur mine and river frontage at mouth of Brazos River; organizing company to develop to full capacity; contracts for mining machinery placed and in charge of New York engineers; press dispatches state development plans include townsite, docks, warehouses, railway terminals, etc., and that James A. Stillman, Frank A. Vanderlip, Samuel McRoberts and A. Chester Beatty of New York, John L. Williams & Sons of Richmond, Va.; John Hays Hammond of Washington, D. C., and others are interested.

W. Va., Kingmont—Sand.—Valley River Sand Co. incorporated with \$80,000 capital stock by A. D. Simon, S. E. Miller, E. M. Taylor, John S. Scott and E. C. Frame, all of Fairmont, W. Va.; purchased and will develop sand properties along Tygart Valley River; will double present capacity of plant, giving daily output of 1000 tons.

MISCELLANEOUS CONSTRUCTION

Ala., Mobile—Coaling Facilities.—Pratt Consolidated Coal Co., Birmingham, Ala., has not matured plans for construction of coaling facilities recently noted to be constructed.

Fla., Key West—Dock, Wharves, etc.—Florida East Coast Railway, J. R. Parrott, president, St. Augustine, Fla., has plans to construct dry-dock and 10 wharves, each 800x100 feet, with basins 200 feet wide between, having depth of 20 to 40 feet; W. J. Krome, constructing engineer, Key West.

La., Shreveport—Dam.—Government will construct dam at foot of Lake Caddo, to cost about \$100,000; will open bids February 20; dam will be 3300 feet long and have lift of four feet; Capt. Thomas H. Jackson, Federal engineer, Dallas, Tex.

N. C., Wilmington—Marine Railway.—Wilmington Marine Railway Co., Edw. P. Bailey, manager, advises Manufacturers Record that completion of railway is contemplated for April 1; railway to have capacity to haul out largest coast steamers and schooners. (H. I. Crandall & Son Company, Boston, Mass., previously noted as contractors; cost within \$75,000.)

S. C., Charleston—Piers.—Southern Railway, B. Herman, chief engineer, Washington, D. C., will, it is reported, improve Piers Nos. 1 and 2 at foot of Laurens St. and extend and remodel Pier No. 3; creosoted piling to be used.

Tex., Aransas Pass—Wharf, etc.—Aransas Pass Channel & Dock Co. will construct wharf and warehouse costing \$25,000. (See "Warehouses.")

Tex., El Paso—Flood Protection.—El Paso county will vote February 12 on \$200,000 bond issue to protect city of El Paso and surrounding territory from overflow of Rio Grande. Address County Commissioners.

Tex., Galveston—Jetty.—Government awarded contract to Charles Clarke & Co., Galveston, Tex., at about \$24,000 to repair north jetty at mouth of Brazos River; contract calls for placing about 1000 tons small riprap, 1650 tons large riprap and concrete blocks, requiring use of 735 cubic yards broken stone, 280 cubic yards sand and 650 barrels cement; Major Earl I. Brown, engineer in charge of district. (Recently mentioned.)

Va., Norfolk—Docks.—The Texas Company (main office, Houston, Tex.) will improve dock facilities. (See "Miscellaneous Enterprises.")

W. Va., Parkersburg—Docks.—Parkersburg Dock Co. incorporated with \$50,000 capital stock by B. S. Pope, E. E. Pope, J. C. McConnell, R. F. Sherwood and others.

MISCELLANEOUS ENTERPRISES

Ala., Birmingham—Contracting.—Ingle Terrace Construction Co. incorporated with \$3000 capital stock; Richard W. Massey, president; M. E. McElroy, vice-president; G. W. Yancey, secretary-treasurer.

Ala., Birmingham—Roofing, Heating, etc.—Spiro Roofing & Heating Co., 2403 Third Ave. N., will conduct general line of roofing, cornice and heating; J. H. Hahn, president; Jonas Spiro, vice-president and secretary; W. E. Freeman, treasurer and manager. (Recently noted incorporated.)

Ark., Hot Springs—Mineral Water.—Potash Sulphur Springs Co. incorporated with \$20,000 capital stock; Philo N. French, president; Isaac Lowenhaupt, vice-president and general manager; W. E. Chester, secretary-treasurer.

Ark., Fort Smith—Laundry.—Arkansas Laundry, W. H. Wilcox, proprietor, 213 S. 6th St., is supplied with machinery for addition recently noted; building contract let to Paine & Jones, Fort Smith.

Fla., Tampa—Photo-engraving.—L. C. Howlett and C. E. Scott, Effingham, Ill., contemplate establishing photo-engraving plant.

Fla., Tampa—Printing.—Tampa Printing Co. increased capital stock from \$10,000 to \$50,000; will install machinery, including linotype; C. J. Blittmann, president.

Ga., Atlanta—Electrical Supplies.—Baltimore Electrical Supply Co. incorporated with \$25,000 capital stock by William J. Flannery and Francis J. Kernan, both of 308 N. Calvert St., Baltimore, Md.; salesrooms, 84 Marietta St., Atlanta.

Ky., Adairville—Operating and Construction.—Byars Operating & Construction Co. incorporated by G. H. Byars, G. T. M. Lean and V. P. Moore.

Ky., Louisville—Contracting.—P. Wirth & Sons incorporated with \$5000 capital stock by Philip Wirth, Sr., Philip Wirth, Jr., and Frank C. Wirth.

Ky., Louisville—Hardwood Flooring.—Schweitzer-Westermann Company incorporated by S. F. Westermann, John W. Schweitzer and George J. Feldhaus.

La., Lake Charles—Printing.—Leon Sugar will open bids and let contract about February 10 to erect building to contain printing establishment on ground floor; 35x100 feet; cost \$6000; plans by E. W. Phillips, Lake Charles. (Recently noted under "Stores.")

Md., Baltimore—Machinery and Supplies.—Aumen Machinery Co. incorporated with \$15,000 capital stock by William S. Aumen, president and treasurer; Edwin L. Stringer, vice-president; Wm. J. Leppert, secretary; will deal in machine tools, engines, boilers, electrical, steam and power transmission machinery, etc.; offices, 107 E. Lombard St.

Md., Baltimore—Sewer Contracting, etc.—Morris Sewers incorporated with \$2400 capital stock by J. Morris Orem (335-A Equitable Bldg.), Lester L. Stevens and K. Edward Schleifer.

Md., Baltimore—Rubber and Rubber Products.—Henderson Rubber Co. incorporated with \$100,000 capital stock by Albert H. Henderson (408 N. Carrollton Ave.), Alfred R. L. Dohme, Joel G. Nasseuer and others.

Md., Baltimore—Steamboat Transportation.—Maryland Steamboat Co., Maryland Trust Bldg., will incorporate with \$350,000 capital stock to operate steamboats between Baltimore and Eastern and Western Shores of Maryland and Virginia; plans include construction of pier 900 feet long at Deal's Island and another at Crisfield, Md.; also proposes to lease or build other piers; Wm. P. Lawson (of Lawson & Co.), 301 Maryland Trust Bldg., is principal promoter.

Md., Westminster—Construction.—Federal Finance & Construction Co. incorporated by Emory M. Newton and T. Dawson of Westminster, and William L. Haworth, 514 Continental Bldg., Baltimore, Md.

Miss., Newton—Printing.—Newton Printing Co. incorporated with \$10,000 capital stock by J. P. Culpepper, J. J. Walker, T. E. Waldrup and others.

Miss., Tylertown—Hardware.—P. E. Payne Hardware Co. incorporated with \$10,000 capital stock by P. E. Payne and W. H. Pickering.

Miss., Vicksburg—Stockyard.—Philip Field is promoting establishment of stockyard; expenditure \$10,000.

Mo., Kansas City—Grain.—Hoebel Grain Co. incorporated with \$30,000 capital stock by Louis Hoebel, Fred W. Hoebel and Edwin C. Hoebel.

Mo., Kansas City—Publishing.—Kansas City Democrat incorporated with \$10,000 capital stock by John Marens, James L. Marens and W. C. Culbertson.

Mo., Kansas City—Publishing.—Marens Publishing Co. incorporated with \$10,000 capital stock by John Marens, James L. Marens and C. Culbertson.

Mo., St. Louis—Printing and Illustrating.—Sanders & Melsheimer Illustrating Co. incorporated with Louis Melsheimer and John V. McGoodwin, both of St. Louis, and Earl B. Sanders, Webster Groves, Mo.

Mo., St. Louis—Contracting.—G. Hartmann Contracting Co. incorporated with \$5000 capital stock by G. Hartmann, Arthur Franke, Emma Hartmann and others.

Mo., St. Louis—Elevator.—Great Western

Feed Co. will erect two-story elevator at Chouteau Ave. and Missouri Pacific Railroad tracks; cost \$14,000.

N. C., Charlotte—Oil Distributing Station.—Standard Oil Co. (main offices, 20 Broadway, New York) will erect buildings to cost \$25,000, including pumphouse 10x12 feet, 7 storage tanks, warehouse 40x100 feet, office building 50x72 feet, stable 22x50 feet and wagon shed 20x64 feet.

N. C., Bailey—Engineering and Surveying.—Sanford Wilson and associates have organized company for surveying and engineering.

Okla., Muskogee—Construction.—Wells-Franklin Construction Co. incorporated with \$5000 capital stock by A. J. Wells, E. J. Franklin and S. T. Huckleberry.

Okla., Oklahoma City—Laundry.—Penny Laundry Co. incorporated with \$5000 capital stock by George Stoncypier, Mrs. Della Stoncypier and J. W. Shelton.

Okla., Oklahoma City—Construction.—Inland Construction Co. incorporated with \$50,000 capital stock by P. M. Speicher, H. M. Johnson and F. C. Love, all of Chandler, Okla.

Okla., Sharon—Grain.—Sharon Grain Co. incorporated with \$10,000 capital stock by D. H. Kelber of Sharon, J. H. Cox and L. O. Street, Woodward, Okla.

Okla., Sayre—Publishing.—Social Democrat Publishing Co. has organized with J. H. Harper, president; P. E. Peeler, vice-president; C. G. Russell, secretary; D. E. Hedgpath, treasurer and manager; machinery, including printing press and gasoline engine, will cost \$1000. (Recently noted incorporated.)

S. C., Greenwood—Laundry.—Henry McKinney, Eugene Pratt and Ray McGhee will establish laundry.

S. C., St. Matthews—Hardware.—Arthur Hardware Co. incorporated with \$3500 capital stock; Z. A. Baxter, president; C. W. Arthur, vice-president; J. F. Klag, secretary-treasurer.

Tenn., Memphis—Construction.—E. S. Mead & Co. incorporated with \$10,000 capital stock by E. S. Mead, E. N. Parham, W. B. Ross, W. E. Gamble and H. Gannaway.

Tenn., Nashville—Stone and Roofing.—Adamant Stone & Roofing Co. incorporated with \$10,000 capital stock by Humphrey Hardison, W. T. Hardison, B. T. Young, G. A. Slack and John A. Bell.

Tex., Hamlin—Printing.—Hamlin Printing Co. incorporated with \$2500 capital stock by G. W. Power, W. W. Johnson and G. M. Shelton.

Tex., Onalaska—Live Stock.—Onalaska Live Stock Co. incorporated with \$18,000 capital stock by J. S. McDowell, L. O. Jackson and Hayne Nelms.

Tex., Port Arthur—Printing.—Lakeside Press incorporated with \$5000 capital stock by J. C. Reynolds, L. M. Davis, E. E. Davis and others.

Tex., Rockdale—Laundry.—J. A. Stein is interested in proposed erection of steam laundry. (See "Machinery Wanted.")

Tex., San Antonio—Laundry.—Laundry De Luxe Co. incorporated with \$30,000 capital stock by J. J. O'Shea, J. J. Norman and M. J. O'Connor.

Va., Norfolk—Farm Supplies.—Norfolk Farm Supply Co. increased capital stock from \$25,000 to \$50,000.

Va., Norfolk—Distributing Plant.—The Texas Company (main office, Houston, Tex.) will enlarge storage tanks, erect additional warehouses and improve dock facilities.

MISCELLANEOUS FACTORIES

Ala., Birmingham—Distillery.—Jack Daniel Distilling Co. incorporated with \$3000 capital stock; Lem Motlow, president; J. D. Motlow, manager and treasurer; R. N. Locke, secretary.

Ala., Samson—Bottling.—Nantz Ice & Bottling Co. is proceeding with construction and equipment of bottling plant. (See "Ice Plants.")

D. C., Washington—Industrial Building.—Robert N. Harper, president, District National Bank, 1406 G St. N. W., and associates contemplate erecting industrial building; initial plans call for building six or seven stories high, of brick and reinforced concrete; floors to be divided into rooms large enough to accommodate light electrically-operated manufacturing plants; tenants to be supplied with power from local electric power plant; provide central freight transportation system; estimated cost \$100,000.

Fla., Bronson—Bottling Works.—J. F. Cobb, Brooksville, Fla., will establish soda bottling works.

Fla., Jacksonville—Ice Cream.—Rand Ice Cream Co. will erect two-story brick building.

Fla., St. Petersburg—Gas.—City Council is prepared to grant 30-year gas franchise; bids received until February 1; W. F. Divine, Clerk. (See "Machinery Wanted.")

Ga., Albany—Gas.—Electric Light and Water Commission will open bids January 30 for construction of water-gas system; about 12 miles of mains; \$50,000 bond issue available; R. J. Edgerly, City Engineer. (Previously mentioned.)

Ga., Atlanta—Bottling Works.—Coca-Cola Bottling Works incorporated with \$100,000 capital stock by Joel A. Smith of Jeffersonville, Ga.; Luke G. Johnson of Gainesville, Ga.; Edgar T. Lassiter of Macon, Ga., and W. G. Keen of Atlanta.

Ga., Atlanta—Fire Extinguishers, etc.—Automatic Fire Extinguisher & Alarm Co. incorporated with \$100,000 capital stock by J. Lindsay Johnson, Floyd county, Georgia; C. L. Saunders, Bartow county, Georgia; C. B. Cobb, G. S. Peck and F. E. Radensleben of Fulton county.

Ga., Atlanta—Aeroplanes.—Thaden's Safety Aeroplane Manufacturing Co. incorporated with \$25,000 capital stock by H. Thaden, W. H. Dodd, J. Stone and J. R. Houchin.

Ga., Americus—Gas.—Americus Gas & Electric Co. applied to Georgia Railroad Commission for authority to issue \$250,000 stock and \$300,000 bonds for extension and improvements.

Ga., Columbus—Gas.—Columbus Railroad Co., John S. Blecker, manager, will improve gas plant and lay new hydraulic mains.

Ga., Fitzgerald—Candy.—Adams' Candy Kitchen incorporated with \$10,000 capital stock by D. P. Adams and H. A. Adams.

Ky., Louisville—Paper Boxes.—Kentucky Paper Box Co. incorporated with \$30,000 capital stock by Frederick S. Bishop, C. T. Hayden and G. B. Shumate.

Ky., Louisville—Culvert Material.—American Culvert Manufacturing Co. incorporated with \$50,000 capital stock by George W. Storms, J. H. Alderson, Charles J. Fegenbush, J. H. Hikes and others.

Ky., Louisville—Soap.—So Sopa Company incorporated with \$3000 capital stock by W. C. Banks, J. K. Banks and C. Kraber.

Ky., Louisville—Aeroplanes.—R. O. Rubel, Jr., & Co. incorporated with \$35,000 capital stock; will continue established plant and erect addition; 10,000 square feet; ordinary construction; cost \$7000; bids opened May 1; cost of machinery (purchased), \$6000; R. O. Rubel, Jr., president; R. W. Ross, vice-president; Charles Wictliffe, secretary-treasurer.

Ky., Paducah—Medicine.—Lax-Fos Company purchased building at 8th and Norton Sts. and will remodel as medicine factory; will erect office buildings.

Ky., Shelbyville—Tobacco.—American Tobacco Co. will, it is reported, build redrying plant; install boiler and other equipment.

La., Shreveport—Incubators.—Louisiana Building Supply Co., C. T. Matkin, manager, contemplates manufacture of incubators. (See "Machinery Wanted.")

Md., Baltimore—Coffee Roasting.—Stokes Coffee Co., Clifford G. Stokes, president, has purchased all machinery and supplies for coffee-roasting plant; leased building at 309 Exchange Pl. (Recently noted.)

Md., Baltimore—Ice Cream.—Maryland Ice Cream & Fruit Products Co. is having plans prepared by Mottu & White, 322 N. Charles St., Baltimore, for improvements to building at 17-19 E. Pratt St. at cost of \$25,000, and for three-story brick building, 29x35 feet, to be erected in rear of structure to be improved; immediate capacity, 30,000 gallons ice-cream per annum; also install laundry, laboratories and ice plant; cost of machinery, about \$75,000. (Recently mentioned.)

Md., Baltimore—Candy.—Record Candy Manufacturing Co. incorporated by Morris A. Rome (435-437 Equitable Bldg.), Grace L. Boehl and Thomas Charles Williams.

Md., Baltimore—Food.—Dietetic Food Co. incorporated with \$30,000 capital stock by Carl A. G. Frisius (4500 Maine Ave.), William Koch and William Layfield.

Md., Hagerstown—Clothing.—Royal Woolen Mills Co. incorporated with \$10,000 capital stock to make men's clothing; president, H. A. McKinnie.

Md., Westminster—Railroad Track Torpedoes.—George Babe Jackson will rebuild plant recently burned; 45x18 feet; fireproof construction; day labor supervised by Paul Case; cost of building and machinery, \$1500; daily capacity, 400 gross torpedoes.

Miss., Meridian—Ice Cream.—J. W. Brookshire, Collins, Miss., will organize company to establish ice-cream factory.

Miss., Moss Point—Paper.—Southern Paper Co. will build mill; engineers in charge of construction, Joseph H. Wallace & Com-

pany, 5 Beekman St., New York. (Recently erroneously referred to under Pascagoula, etc.)

Miss., Pascagoula-Turpentine.—Company organized by V. F. Flanders of New Orleans, La.; Mac White of Ocean Springs, Miss., and N. Napier of Shepherd, Fla., to manufacture turpentine from pine stumps of cut-over pine land; property owned by Kracke & Flanders of New Orleans; George MacFarland, Moss Point, Miss., will erect still and other buildings.

Mo., Hardin—Harness Snap.—Albert L. Strohl contemplates establishing plant to manufacture harness snap.

Mo., St. Louis-Dairy.—Pevely Dairy Co. will erect three-story plant at present location, 3301-3303 Park Ave.; cost \$20,000.

Mo., St. Louis—Fireproof Doors, etc.—United States Fire Protection Co. incorporated with \$3000 capital stock by G. F. Garner, G. V. Clayton and D. L. Clayton to manufacture fireproof doors, shutters, etc.

Mo., St. Louis—Paper.—Hagen Paper Co., 113 S. 8th St., will build reconverting plant and factory; details not complete for eight months; H. Hagen, Jr., president.

Mo., St. Louis—Groceries.—Dapini Grocery & Macaroni Manufacturing Co. incorporated with \$25,000 capital stock by Hugo Dapini, Ricardo Zanotte, Joseph Leto, Pietro Proanzo and others.

N. C., Greensboro—Cigars.—Gulfport Cigar Co. incorporated with \$25,000 capital stock by J. T. Wade, M. F. Fox and A. L. Hammond.

N. C., Wilmington—Wood Distilling.—National Wood Distilling Co. completed \$6000 demonstration plant with daily capacity two tons of light wood; if it is successful will increase capacity and erect other plants in suitable locations.

Okla., Harshorne—Extracts.—Oklahoma Extract Co. incorporated; George T. Clark, president; F. A. Raymond, vice-president; D. W. Keller, secretary-treasurer; will manufacture flavoring extracts and toilet articles; erect no building at present.

Okla., Enid—Cigars.—Bruhn-Neville Cigar Manufacturing Co. will continue established factory and proposes to improve plant. (Recently reported incorporated with \$5000 capital stock by H. F. Bruhn and others.)

Okla., Oklahoma City—Soap.—Imperial Soap & Oil Co. incorporated with \$15,000 capital stock by E. P. Fitzpatrick, Mildred M. Dalzell and others.

Okla., Oklahoma City—Corn Poppers.—Lightner Automatic Corn Popper Co., 825 W. 16th St., has organized with R. B. Sifers, president; E. E. Parnell, vice-president; F. W. Wardwell, secretary; G. A. Lightner, treasurer; will have machine manufactured by contract. (Recently noted incorporated with \$10,000 capital stock.)

Okla., Tulsa—Oil Well Supplies.—Continental Supply Co. organized with \$1,000,000 capital stock to manufacture oil well supplies; Sumner Merriek, president; A. G. Hegon, vice-president; James F. Adams, treasurer; William R. Wilkinson, secretary, all of Pittsburgh, Pa.

Tenn., Columbia—Monuments.—McNeel Monument Works increased capital stock from \$12,000 to \$20,000; purchased site on which to build plant.

Tenn., Humboldt—Bottling.—Coca-Cola Bottling Works, Jackson, Tenn., will expend \$18,000 on building and equipment of branch at Humboldt.

Tenn., Memphis—Coffee and Candy.—Shelby Candy & Coffee Co. incorporated with \$50,000 capital stock by G. G. Lamb, S. L. Lewis, D. R. Wagner, D. Eugene Wagner and R. R. Holcomb.

Tenn., Memphis—Medicine.—Raleigh Medical Co. will erect concrete building to cost \$8,000 at 892 Pennsylvania St.

Tenn., Paris—Toilet Articles.—National Toilet Co., A. B. Lamb, president, is remodeling four-story building and will equip for manufacturing toilet articles; 64x108 feet; brick; metal roof; machinery purchased. (Recently noted purchasing opera building and to remodel.)

Tex., Bay City—Ice Cream.—I. E. Franklin, Franklin, Ind., will establish ice-cream factory.

Tex., Fort Worth—Hair and Bristle Plant.—Southwestern Hair & Bristle Co., Dallas, Tex., purchased site 140x300 feet and will establish plant to manufacture hair for mattresses, bristles for brushes, etc.; has equipment.

Tex., Houston—Bakery.—Thames & Sons, Victoria, Tex., will establish bakery at Magnolia Park; site, 50x100 feet; cost of building, \$2500.

Tex., Huntsville—Sugar.—Prison Commis-

sion, Ben E. Cabell, chairman, will receive bids until February 14 for supplying crusher, other machinery and repairs for Clemens State farm sugar mill and Harlem State farm sugar mills. (See "Machinery Wanted.")

Tex., Lindale—Whiffletree Attachment.—Whiffletree Attachment Co. incorporated with \$10,000 capital stock by W. P. Bradshaw, T. M. Bradshaw, Sam T. Morris and others.

Tex., San Antonio—Guns.—C. D. Lovelace, San Angelo, Tex., contemplates establishing plant to manufacture patented trap gun; is organizing company with \$250,000 capital stock.

Tex., Taylor—Gas.—Taylor Heat & Light Co. awarded contract to Peter J. Sult, Lima, O., to construct gas plant; 30x40 feet; brick; fireproof construction; cast-iron roof; cost \$2500; A. G. Johnson, Milwaukee, Wis., engineer in charge; machinery contracts closed; daily capacity 100,000 cubic feet of gas. (Recently noted.)

Tex., Waco—Polish.—Quick Work Metal Polish Co., M. F. Kettler, president, San Antonio, Tex., contemplates establishing plant.

Va., Bedford City—Tobacco.—Clark Bros. & Co. will rebuild tobacco factory reported burned; 60x175 feet; three stories and attic; plans by J. M. B. Lewis, Lynchburg, Va.; machinery will include full-truck system for redrying leaf tobacco, power screws, electric elevator, etc.; capacity, 2,000,000 pounds per annum of leaf tobacco.

Va., Bridgewater (R. F. D. No. 2)—Brooms. G. M. Caricofe will rebuild broom factory reported burned; machinery supplied.

Va., Suffolk—Cigars.—F. T. Wise Cigar Co., F. T. Wise, president, will increase capacity of plant; machinery purchased.

MOTORS AND GARAGES

Ga., Atlanta.—Dobbs-LaHatte Company incorporated with \$3000 capital stock by S. C. Dobbs, M. T. LaHatte and C. G. Gresen.

Ky., Glasgow.—Devney Automobile Co. incorporated with \$50,000 capital stock by R. S. Devney, W. H. Jones, J. S. Cable and J. K. White.

Mo., St. Louis.—G. T. Burdeau awarded contract to Stephens & Pierson, St. Louis, to erect building to be leased by Missouri Motor Co.; two stories; 50x71 feet.

N. C., Charlotte.—American Motor Car Co., George F. Rutzler, Jr., secretary and manager, will erect fireproof building to cost \$25,000. (See "Machinery Wanted.")

S. C., Greenville.—Pichard Bros. of Pichard Motor Car Co., Brockton, Mass., are reported as to establish automobile plant.

S. C., Greenville.—Raven I. McDavid will erect garage and residence. (See "Dwellings.")

Tex., Austin.—Capital City Auto Co. incorporated with \$35,000 capital stock by Puerre Bremond, W. H. Graham, Howell J. Grinnan and R. M. Thompson, Jr.

Tex., Dallas.—Henderson Cole Motor Co., W. F. Bridwell, president, 205 Commerce St. (recently noted incorporated with \$10,000 capital stock), will conduct general agency for Cole automobile.

W. Va., Parkersburg.—C. Skidmore will erect garage at 1035 Market St.; stone front with plate-glass windows; will be occupied by Market Garage & Machine Co.; building will be 50x165 feet; ordinary construction; natural-gas heat; electric lighting; cost \$6000; contract awarded to George A. Davidson. (See "Machinery Wanted.")

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Ala., Opp.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., will, it is reported, erect coal chute at Opp, on Alabama & Florida division.

Fla., Jacksonville.—Seaboard Air Line Railway, W. L. Seddon, chief engineer, Portsmouth, Va., awarded contract to Burwell & Hillyer, Jacksonville, to construct terminals consisting of two warehouses, 84x450 feet and 110x370 feet, respectively; silt 190x470 feet and trackage; estimated cost, \$181,000. (Previously mentioned.)

La., De Quincy.—Kansas City Southern Railway, C. E. Johnston, chief engineer, Kansas City, Mo., will, it is reported, erect five-stall roundhouse and repair shops.

Miss., Laurel.—New Orleans, Mobile & Chicago Railroad, W. F. Owen, general manager, Mobile, Ala., contemplates, it is reported, building roundhouse.

S. C., Charleston.—Mark W. Potter, president of Carolina, Clinchfield & Ohio Railway, 24 Broad St., New York, wires Manufacturers Record as follows: "It is my expectation that construction on Charleston terminals will

begin at early date; cannot say this will be within 60 days; character of construction not definitely decided; probably steel; to cost approximately \$400,000." (Previously mentioned.)

Tenn., Memphis.—Arkansas & Memphis Railroad Bridge & Terminal Co. organized with following officers: President, J. T. Harahan of Chicago (formerly president of Illinois Central Railroad); vice-president, E. E. Wright; secretary-treasurer, George H. Crosby, also of Chicago; company recently mentioned applying for charter and planning ultimate expenditure of \$20,000,000 to construct railroad bridge across Mississippi River, build passenger and freight stations, etc.; organized by Chicago, Rock Island & Pacific Railroad, J. B. Berry, chief engineer, Chicago, Ill.

ROAD AND STREET WORK

Ala., Birmingham.—City awarded contract to McCartin Contracting Co. of Birmingham to pave portion of 30th St. with bitulithic.

Ark., Helena.—City will construct about 20,000 square yards of brick paving in district No. 6; amount available, \$50,000; bids opened February 2; E. A. Kingsley, engineer in charge; S. S. Faulkner, chairman commission. (See "Machinery Wanted.")

Ark., Fort Smith.—City will pave Garrison Ave. with brick, asphalt or creosote block; width of street, 120 feet; length, one mile. D. J. Young, Lewis Friedman and James Crier are paving commissioners.

Ark., Little Rock.—City awarded contract to George B. Swift & Co., Chicago, Ill., to pave Rector Ave. from 3d to 4th St. with vitrified brick and 3d St. from Rector Ave. to Byrd St. with creosoted wooden blocks; Fox & Co. of Chicago will construct storm sewer; cost about \$16,000; work is to be undertaken jointly by city and Chicago, Rock Island & Pacific Railroad; H. Levinson, Superintendent of Public Works, will be in charge.

Fla., De Funiak Springs.—Walton County Commissioners will construct 60 miles of sand-clay roads in Township 2 north, including necessary culverts; also 35 miles of main line running east and west through entire county and 25 miles of lateral roads running north and south; bids received until February 17; Charles H. Gordon, clerk. (See "Machinery Wanted.")

Fla., St. Augustine.—City will grade, pave, curb, place necessary storm sewers and catch basins, and drain Saragossa St. from Cordova to Malaga St.; bids received until January 31; City Council will open bids at 7:30 P. M. January 31; John M. G. Carrera, City Clerk. (Recently mentioned. See "Machinery Wanted.")

Ga., Americus.—Special correspondent telegraphs Manufacturers Record that Sumter County Commissioners will soon decide date of election for \$100,000 bond issue for road construction.

Ga., Americus.—Sumter county contemplates \$100,000 bond issue for road improvements. Address County Commissioners.

Ga., Atlanta.—Finance Committee appropriated \$7000 for paving Highland Ave.; R. M. Clayton, chief of construction.

Ga., Atlanta.—City bids (recently noted to be received February 5) will include chert, broken stone, sand and cement for street and sidewalks; granite and concrete curbing, and brick, tile and sheet cement sidewalk work; R. M. Clayton, chief of construction. (See "Machinery Wanted.")

Ga., Barnesville.—City will grade and improve streets and sidewalks. Address The Mayor.

Ga., Columbus.—City and Muscogee county will construct roads; character and amount of work not determined; no contract; W. C. Campbell, engineer in charge for city; J. R. Lane, superintendent for county. (City recently noted to vote on \$50,000 bond issue.)

Ga., Elberton.—City will improve streets; cost \$25,000. Address The Mayor.

Ky., Louisville.—Board of Public Works will open bids February 7 for construction of vitrified brick paving on 9th St., Xavier and Oak Sts.; Board will open bids February 5 for reconstruction of 10th St. from Oak to Ormsby St. with vitrified brick at estimated cost of \$5600.

Ky., Louisville.—Board of Public Works awarded following contracts for street paving: F. G. Breslin, Market St. from 26th to 28th St., vitrified block; G. W. Gosnell, Shelby St. from Oak to Camp St., vitrified block; L. R. Flagg, Brook St. from Walnut to Chestnut St., vitrified block; Louisville Asphalt Co., Walnut St. from 24th to 26th St., asphalt; open bids February 5 for about \$44,000 work of asphalt street reconstruction

on portions of 1st, 5th, Chestnut, 6th, Jefferson and Walnut Sts.

Ky., Mt. Sterling.—City will construct paving recently noted; vitrified block on concrete foundation, with concrete curb and gutter on about 12,000 square yards; bids received until 7 P. M. February 14; H. M. Ringo, City Clerk. (See "Machinery Wanted.")

La., Crowley.—City contemplates constructing seven blocks of pavement; 30 feet wide on each side with neutral ground in center; character of material to be used, etc., not determined; J. D. White, engineer in charge; R. J. Boudreaux, City Clerk. (Recently noted.)

La., New Orleans.—City will pave or repair Burgundy St. from Poland to Esplanade St., 15 blocks, and embracing about 12,500 square yards; W. J. Hardee, City Engineer, authorized to receive bids.

Md., Baltimore.—R. B. Fentress of Norfolk, Va., has invited bids through J. Spence Howard, engineer, 11 E. Lexington St., Baltimore, for improvements to tract of land between Forest Park and Windsor Hills; improvements to consist of construction of 48,489 square feet of cement sidewalks, 13,000 cubic yards of grading, 13,854 feet of concrete gutter, 8870 linear feet of sewers, and two miles of macadam road. (See "Machinery Wanted.")

Miss., Jackson.—Highway commission first and fifth districts of Hinds county will receive bids until February 8 for construction of proposed Jackson and Terry sand and clay road; George W. Sarlis, engineer. (See "Machinery Wanted.")

Miss., Hazlehurst.—Copiah county will construct about 35 miles of gravel roads in District No. 1; County Supervisors, B. Shelton, clerk, will receive bids until February 5; The George Company, Randolph Bldg., Memphis, Tenn., is engineer. (See "Machinery Wanted.")

Miss., West Point.—City will macadamize five blocks on E. Main St.; material will probably be novaculite; surveys to begin at once; D. Cottrell, Mayor; C. L. Wood, Engineer, Columbus, Miss.

N. C., Durham.—City will grade and macadamize Oakwood Ave.; will soon invite bids for grading; cost \$2000; John W. Pope, chairman of Street Committee; W. T. Blackwell, engineer in charge.

N. C., Gastonia.—City contemplates voting on \$35,000 bond issue for street improvements. Address The Mayor.

N. C., Hendersonville.—City voted \$24,000 bond issue for constructing 20,000 square yards of asphalt pavement; cost \$20,000; contract awarded to R. G. Lassiter, Oxford, N. C.; H. G. Bailey, engineer in charge.

N. C., Sanford.—C. H. Smith wires Manufacturers Record: "Election in Lee county for \$100,000 bond issue for good roads carried." This will be available for construction of sand-clay roads; estimated amount, 240 miles; engineer not yet employed; J. J. Edwards, Lemon Springs, N. C., is chairman Board of County Commissioners.

Tenn., Chattanooga.—Hamilton county is arranging to construct proposed 2½ miles on Lookout Mountain-Vauhatchie Rd. over Lookout Mountain; estimated cost, \$65,000. Address County Commissioners.

Tenn., Dukedom.—Fulton & Dukedom Gravel Road Co. organized with H. V. Parrish, president, and C. H. Ross (cashier Dukedom Bank) treasurer; will construct gravel road from Dukedom to Fulton, and later extend road east to Tennessee River and west from Fulton to Hickman, Ky.

Tenn., Springfield.—Robertson county will vote February 24 on \$300,000 bond issue for road construction. Address County Commissioners.

Tenn., Memphis.—Shelby county will gravel State Line Rd.; bids for hauling and spreading gravel received until February 1; about 2500 yards of gravel to be hauled distance of from one to four miles from switch at Germantown; D. H. Pope, secretary, County Commissioners. (See "Machinery Wanted.")

Tex., Beaumont.—City will pave additional streets at cost of about \$300,000. Address The Mayor.

Tex., Galveston.—City will pave with vitrified brick alleys between 20th and 25th Sts. from Avenues A to E, and between 21st and 24th Sts. Avenues E and F; comprise 1000 square yards pavement on four-inch concrete base, 11,810 square yards on sand base, 1500 linear feet concrete retaining bulkhead and taking up and relaying about 70 square yards brick pavement; bids received until February 1; A. T. Dickey, City Engineer. (See "Machinery Wanted.")

Tex., Galveston.—Galveston county will grade, shell, bulkhead and otherwise im-

prove Avenue S road down island from 7th to 13th mile-post, and thence to beach; bids received until February 5; John M. Murch, County Auditor. (See "Machinery Wanted.")

Tex., Gilmer.—Upshur County Commissioners awarded contract to C. L. Wilson to construct 18 miles of road.

Tex., Mexia.—Commissioners' Court of Limestone County, No. 4, contemplates constructing 75 miles of crushed-rock road; \$150,000 available as soon as bonds are approved; B. J. Hancock, Commissioner.

Tex., Port Lavaca.—Preluct No. 4 of Calhoun county will vote on \$100,000 bond issue for road construction; district includes Port O'Connor and Seadrift. Address County Commissioners.

Va., Richmond.—T. M. Carrington of Chamber of Commerce advises Manufacturers Record that Chamber will soon call meeting to organize forces for and to consider route of proposed highway between Richmond and Washington, for which preliminary survey and map were recently made. (Previously noted.)

Va., Tazewell.—Tazewell county will grade, drain and macadamize 113 miles of road in Clear Fork, Jeffersonville and Malden Springs districts; bids received until February 13; D. B. Daniel, chairman County Supervisors. (See "Machinery Wanted.")

SEWER CONSTRUCTION

Ala., Union Springs.—City awarded contract to Dabbs & Wetmore, Meridian, Miss., at \$25,000 to construct 11 miles of sewers and disposal plant; Wilburn Hill, engineer, Atlanta, Ala. (Call for bids lately noted.)

Ark., Little Rock.—City awarded contract to Fox & Co., Chicago, Ill., to construct storm sewer on Rector Ave. from 3d to 4th St., and on 3d St. from Rector Ave. to Byrd St. (See "Road and Street Work.")

Ga., Atlanta.—City bids (recently noted to be received February 5) will include furnishing of about 60 miles vitrified pipe, approximately 3000 barrels cement, castings for manholes, etc.; also work of laying about 60 miles of sewers during 1912; R. M. Clayton, chief of construction. (See "Machinery Wanted.")

La., New Iberia.—City is considering construction of sewer system. Address The Mayor.

Md., Baltimore.—R. B. Fentress of Norfolk, Va., has invited bids through J. Spence Howard, engineer, 11 E. Lexington St., Baltimore, for construction of 8870 linear feet of sewers, etc., on tract of land between Forest Park and Windsor Hills, Baltimore. (See "Roads and Streets" and "Machinery Wanted.")

Md., Baltimore.—Owners' Realty Co., Charles W. Hurst, president, Exchange Bldg., Lexington and Charles Sts., Baltimore, Md., awarded contract to Hines & Hayman, 15 E. Fayette St., Baltimore, to construct 3000 feet of sewers.

Md., Baltimore.—City will receive bids until February 7 for construction of trunk sanitary sewers in Frederick Rd., sanitary contract No. 79; approximate quantities, 10,500 linear feet vitrified pipe sewer, 5 to 15 inches in diameter, and 6000 linear feet vitrified pipe house connections; Charles England, chairman Sewerage Commission, American Bldg. (See "Machinery Wanted.")

Md., Baltimore.—Board of Awards rejected bids for construction of sanitary sewers under Sanitary Sewer Contract No. 81, and will readvertise for bids; cost about \$200,000; Charles England, chairman Sewerage Commission.

Mo., Cameron.—City awarded contract to Rogers-Wood Company, Council Bluffs, Ia., to construct 12,280 feet of 8-inch sewers, 26 manholes and 3 flush tanks; contract price, \$3249.12; W. F. Null, Cameron, engineer in charge. (Recently noted.)

Mo., Kansas City.—John W. Danfort, Buffalo, N. Y., is lowest bidder at \$43,000 for erection of pumphouse in West Bottoms to protect low land from backwater in sewers; Louis R. Ash, City Engineer. (Call for bids lately noted.)

N. C., Gastonia.—City contemplates voting on \$10,000 bond issue for extension of sewer system. Address The Mayor.

Tenn., Lexington.—City will expend \$50,000 to construct three-quarters of a mile of sewers, electric-light plant with 125 K. V. A. lights and water-works of 150,000 gallons capacity; will advertise for bids; R. C. Huston, engineer in charge, 1634 Exchange Bldg., Memphis, Tenn. Recently noted. See "Machinery Wanted.")

Tex., Galveston.—City will construct vitrified pipe sewer laterals in alleys between 20th and 22d Sts. and Avenues A and F;

will require 3240 feet 8-inch vitrified pipe, 746 linear feet 6-inch vitrified pipe, 126 pieces 6x8-inch Y branches, 3240 linear feet 2x10-inch running-board and 12 manholes; bids received until February 1; A. T. Dickey, City Engineer. (See "Machinery Wanted.")

TELEPHONE SYSTEMS

Fla., Ruskin.—Ruskin Telephone Co. will be organized by N. M. Wheeler and Mr. Estes to construct telephone system.

Ky., Louisville.—Home Telephone Co. will erect branch exchange in West End; tentative plans call for fireproof building; two stories high, of brick, steel and concrete; estimated cost, \$25,000.

N. C., Burk Grove, R. F. D. No. 2 from Winston-Salem.—Company has been organized by T. D. Speas, B. D. Conrad, P. E. Burk, C. L. Slater and others to construct telephone system.

N. C., Fulp.—Town Fork Telephone Co. organized to construct telephone system from Fulp into Forsyth and Stokes counties; C. Bodenheimer, president; Dr. Elias Fulp, secretary-treasurer.

N. C., Murfreesboro.—United Telephone Co. incorporated with \$25,000 capital stock by V. Vaughan, D. C. Barnes, B. B. Winborne, L. J. Lawrence and others.

Okla., Blackwell.—Prairie Home Telephone Co. incorporated by W. Harsman, E. E. McGinnis, George H. Smith and W. R. Gillespie.

Okla., Muskogee.—Pioneer Telephone & Telegraph Co. will expend about \$100,000 in improvements to provide for about 2500 additional telephones; is placing underground about 10,000 feet of lead cable, and ordered 15 carloads of overhead and lateral cable.

Tenn., Dresden.—Cumberland Telephone & Telegraph Co. (executive office, Nashville, Tenn.), will improve telephone exchange, erect new poles, install switchboard and place new wiring. Foster Hume is manager of Memphis division.

Tenn., Trenton.—Gibson County Telephone Co. incorporated with \$5000 capital stock by J. J. Tatem, W. F. Jones, R. R. Boone, R. R. Collins and others.

Tex., Paint Rock.—West Texas Telephone Co., general offices at Brownwood, Tex., acquired property of Paint Rock Telephone Co., including local exchange and 100 miles of toll line connecting with Ballinger, San Angelo, Eden and other points.

Tex., Winters.—Independent Telephone Co. will increase capital stock from \$15,000 to \$50,000 and extend telephone system.

Va., Franklin.—City granted 15-year telephone franchise to W. N. McAnge, Jr., Franklin exchange; will connect with Southern Bell Telephone & Telegraph Co.'s exchange; also has telephone franchises at Courtland and Boykins, Va.; proposes to rebuild system and erect exchange at Courtland.

W. Va., Cottageville.—Cottageville, Baden & Point Pleasant Telephone Co. incorporated with \$5000 capital stock by S. L. Barber, W. E. Evans, W. L. Beckwith, William Lloyd and others.

TEXTILE MILLS

Ala., Uiontown.—Cotton Goods.—Canebrake Cotton Mills incorporated by W. H. Taylor, G. B. Johnston and others.

Md., Baltimore.—Cotton Duck.—Mt. Vernon-Woodberry Cotton Duck Co. (International Cotton Mills Corporation, 86 Worth St., New York) will have plans prepared by Lockwood, Greene & Co., 93 Federal St., Boston, Mass., for constructing addition; probably weave shed for 1000 looms, so company can utilize present mills for spinning only and concentrate all weaving in central plant; probably concrete construction; dimensions and other details not ready. (Company previously mentioned as proposing central weave shed.)

Md., Hagerstown.—Royal Woolen Mills Co., recently reported incorporated, will not manufacture woollens. (See "Miscellaneous Factories.")

N. C., Charlotte.—Cotton Goods.—E. A. Smith Manufacturing Co. chartered with \$300,000 capital stock by E. A. Smith, Robert Lassiter and T. C. Guthrie to build 15,000-spindle mill.

N. C., Biadonboro.—Cotton Goods.—A. A. Hilburn, Henry C. Bridger, Jr., and others plan organization of \$150,000 company to build cotton mill.

N. C., Asheville.—Colored Cottons.—Asheville Cotton Mills will expend about \$50,000 for building improvements and new machinery; now has 10,112 ring spindles, 450 narrow looms, etc. (Recently reported.)

W. Va., Terra Alta.—Woolen Goods.—Terra Alta Woolen Mills plans to rebuild plant

burned last year; will not have definite plan before July.

Tenn., Nashville.—Cotton Cloth.—Thomas A. Miller, Greenville, S. C., representing New England capital, proposes organization of \$500,000 corporation to build mill of 20,000 spindles and 500 looms.

WATER-POWER DEVELOPMENTS

Ala., Montgomery.—Central Alabama Power Co. incorporated with Henry Horne of Macon, Ga., as president; W. H. Taylor of Montgomery, vice-president; Julius Horne of Milledgeville, Ga., treasurer. Henry Horne wires Manufacturers Record: "My individual holdings call for over 100,000 horsepower; considering now closing with one of three groups of bankers for immediate development; others that are interested in call for 400,000 horse-power; offers to finance them now being considered; to be determined fully by February 2." (Plans of Henry Horne and associates for extensive water-power-electrical developments recently detailed.)

Ala., Montgomery.—Alabama Traction, Light & Power Co., Ltd., incorporated with \$30,000,000 capital stock, \$10,000,000 being subscribed through Sperling & Company of London, England; is holding corporation of Alabama Interstate Power Co. (Charles H. Baker of New York, president), heretofore mentioned as planning water-power developments on Coosa, Tallapoosa and Tennessee Rivers; estimates are that 300,000 horse-power can be developed without storage and 500,000 with storage; report states plans adopted for expending \$20,000,000 to \$30,000,000 and that ultimately \$50,000,000 will be invested. (Interstate Power Co. plan heretofore outlined.)

Ga., Atlanta.—Central Georgia Transmission Co., L. A. Magraw, chief engineer, Georgia Life Bldg., Macon, Ga., will erect \$15,000 substation of brick, concrete and steel construction; contractor, Central Georgia Power Co., Macon, Ga., and plans by same company's engineering department; construction engineer not yet appointed; contract let at \$35,000 for transformers, switchboard, etc. (Recently mentioned.)

S. C., Georgetown.—Curtis Power Co. incorporated with \$5000 capital stock by P. H. Pow, J. M. Powell and Capers C. Barr.

WATER-WORKS

Ga., Athens.—City contemplates extending water-works intake; cost \$10,000; J. W. Barnett, City Engineer.

Ga., Macon.—Water Commissioners, W. H. Fetner, chairman, will receive bids until noon February 21 for erection of pumping station according to plans and specifications on file with Commissioners; plans and specifications will be sent upon receipt of \$10; certified check for \$3000 to accompany each bid. (Recently mentioned.)

Ga., Helena.—City will construct water-works; awarded contract to J. B. McCrary & Co., Atlanta, Ga.

Ky., Henderson.—City will receive bids until March 2 for furnishing plans for filtration plant; cost \$80,000 to \$70,000. W. I. Thompson, Mayor. (Recently mentioned. See "Machinery Wanted.")

Md., Frederick.—City will petition Legislature for authority to issue about \$50,000 of bonds for building storage reservoir and purchase of surrounding watershed. Address The Mayor.

Md., Hagerstown.—City will petition Legislature for authority to purchase Washington County Water Co.'s water system, comprising two reservoirs on mountains at Smithsburg and Edgemont, respectively, storage reservoir near Hagerstown, etc. Address The Mayor.

N. C., Gastonia.—City contemplates voting on \$17,500 bond issue for extension of water-works. Address The Mayor.

N. C., Kenilworth (not a postoffice).—Kenilworth Development Co. (J. M. Chiles, Asheville, N. C., and others) contemplates constructing water-works. (See "Land Developments.")

Okla., Dustin.—City will expend \$23,000 to construct water-works; E. W. Gantt, engineer in charge. (Recently noted to receive bids until January 22.)

Okla., Hobart.—City will construct water-works; cost \$30,000; no additional machinery required; C. G. Long, Mayor. (Bond issue recently reported voted for water works, etc.)

Okla., Muldrow.—City voted \$33,000 bond issue to construct water-works and transmission lines from Fort Smith, Ark., to Muldrow; contract let to F. R. Stone, Lima, O.; Western Engineering Co., 703 American National Bank Bldg., Oklahoma City, Okla.,

designing and consulting engineer. (See "Electric Plants.")

Okla., Oklahoma City.—City will vote on issuance of \$100,000 water-works bonds. Address The Mayor. (Previously mentioned.)

Okla., Porum.—Township awarded contract to Kennedy & Fleming, Oklahoma City, Okla., to construct water-works and electric-light plant; cost \$23,000; water-works capacity, 250,000 gallons; pumping station to be erected; M. A. Earl & Co., engineers in charge, 725 Flynn-Ames Bldg., Muskogee, Okla. (Recently noted.)

Okla., Tallhina.—Town will construct water-works, comprising pumping station, reservoir, dam, gasoline-driven triplex pump, mains, hydrants, etc.; Mullergren Engineering Co. of Poteau, engineer in charge; W. B. Robertson, Town Clerk.

Tenn., Lexington.—City will expend \$50,000 to construct water-works, sewers and electric-light plant; water-works to have 150,000 gallons capacity; construct three-quarters of a mile of sewers and electric-light plant with 125 K. V. A. lights; will advertise for bids; R. C. Huston, engineer in charge, 1634 Exchange Bldg., Memphis, Tenn. (Recently noted to receive bids January 18 for drilling deep well. (See "Machinery Wanted.")

Tex., Dallas.—Richard B. Nelms, Water Commissioner, will recommend to City Commission purchase of centrifugal pumping engine to be installed at Bachman's reservoir; estimated cost, \$46,000.

Tex., Jefferson.—City will extend water-works; \$10,000 bond issue available; J. B. Hussey, Mayor.

Va., Norfolk.—Norfolk County Water Co. awarded contract to Perry W. Ruth & Company of Norfolk at \$110,000 to lay 19-mile pipe line from Gum Swamp water course, near shores of North Landing river, across Princess Anne county to Kempsville, and thence to connect with main near Norfolk city lakes; contract includes construction of dam at head of Gum Swamp; 800 acres to be flooded; requires 24,500 feet 24-inch wooden pipe and 28,635 feet 16-inch iron pipe. (Recently mentioned.)

W. Va., Bellepoint.—Bellepoint Water-works incorporated with \$5000 capital stock by J. A. Woodrum, Ben D. Keller, C. L. Miller, D. A. Halstead and others.

W. Va., Ripley.—City will expend \$13,000 on construction of water-works recently noted; plans by J. G. Cramer, Parkersburg, W. Va.; erect pumphouse; concrete reservoir; date of letting contract not fixed; B. F. Rader, Mayor.

WOODWORKING PLANTS

Ala., Tuscaloosa.—Horne-Sparks Veneer Co. succeeds Southland Veneer Co.; will (in addition to manufacture of veneers) operate plant to manufacture candy pills from rotary-cut veneer; complete equipment purchased. (Southland Veneer Co. recently noted to install additional equipment.)

Ark., Monette.—Spokes.—Monetta Spoke Co. will rebuild spoke factory recently burned.

Fla., Idella.—Shingles, Crates, etc.—E. C. Jordan, Olga, Fla., will erect and equip building for manufacture of building materials (including shingles), crate materials, crates, etc.; cost of building, \$3000; cost of machinery, \$2000. (See "Lumber Manufacturing" and "Machinery Wanted.")

La., Finerville.—Staves.—Alexandria Coopers Co., C. A. Weis, general manager, leased 16 acres on which to erect factory; capacity 10,000 staves daily.

Mo., St. Louis.—Carriages and Wagons.—Maschmeier & Schaefering will enlarge plant at 15th and Chambers Sts.; erect two-story building to cost \$7000.

Mo., St. Louis.—Millwork.—Western Millwork Co. incorporated with \$5000 capital stock by Casper J. Twiellenmeier, Theodore J. Twiellenmeier and Albert E. Hausman.

N. C., High Point.—Chairs.—United Mills Co., F. H. Ford, president (recently noted incorporated with \$100,000 capital stock), will operate chair showroom and deal in chairs.

N. C., Lenoir.—Boxes.—Grandin Lumber Co., W. J. Grandin, president, Tidoute, Pa., contemplates erecting box factory, etc. (See "Lumber Manufacturing Plants.")

Va., Richmond.—Consolidated Furniture Works, Altavista, Va., states company will probably rebuild Richmond plant recently reported burned; directors have not fully decided.

Va., Richmond.—Sash, Doors, etc.—Binswanger & Co. will rebuild plant reported burned at \$175,000 loss; they wire Manufacturers Record: "Intend to rebuild as speedily as possible; likely upon present site; five stories; 100,000 square feet of floor space; mill construction; sprinkler equipment."

BURNED

Ala., Birmingham.—Stephen Smith's residence in Edgewood; loss \$20,000.

Ala., Birmingham.—T. H. Molton's building, 1816-18 Second Ave.; loss \$35,000.

Ala., Birmingham.—Southern Bell Telephone Co., D. F. Turnbull, manager, will repair telephone exchange building burned at loss of about \$150,000.

Ala., Center.—Farmers' Union cotton gin near Howell's Cross Roads; loss about \$3000.

Ala., Decatur.—J. Y. Gustin's residence and store; loss \$5000.

Ala., Florida.—Florida Hotel; loss \$5000.

Ala., Jasper.—B. B. Sherer's residence on North Highlands; loss \$3000.

Ark., Hoxie.—Mrs. Joseph Daoust's two residences; A. J. Sniff's residence; total loss about \$10,000.

Ark., Monette.—Monette Spoke Co.'s plant; loss about \$4500.

Ark., Paradise.—Nathan Haynes' cotton gin; estimated loss \$2300.

Ga., Atlanta.—Archibald Davis' residence at 1220 Peachtree Rd.; loss several thousand dollars.

Ga., Berlin.—Berlin Supply Co.'s building; loss \$10,000.

Ga., Dalton.—Building occupied by Dalton Daily Argus.

Ga., Davisboro.—J. M. Brown's store, loss \$8000; J. W. Aldred's store.

Ga., Lithia Springs.—Sweetwater Park Hotel; loss \$250,000.

Ga., Waynesboro.—J. F. Neeley's residence; loss \$10,000.

Ky., Blandville.—Modern Woodmen of America building.

Ky., Paducah.—Hotel Belvidere damaged; loss \$3500.

Ky., Paducah.—Cochran Shoe Co.'s store; loss \$3000.

Ky., Pikeville.—Marrowbone Coal & Coke Co.'s coal crusher, tipples, incline, etc., loss \$15,000; main office, Uniontown, Pa.; also Chesapeake & Ohio Railway's depot; F. I. Cabell, Richmond, Va., is chief engineer.

Ky., West Point.—Herbert Goldsmith's residence; loss \$3000.

La., Monroe.—Swayze Packing Co.'s plant; loss \$60,000.

La., Lake Charles.—Jones Printing Co.'s plant partially destroyed; loss about \$7000.

Md., Baltimore.—Rhein Bros.' carriage repository at 940-42 Linden Ave.; building owned by Robert Kinnor, 315 W. Fayette St.; loss \$18,000 to \$20,000.

Md., Baltimore.—Mrs. Charles Van Horn's residence at 4006 Fernhill Ave.; loss about \$6500.

Md., Lauraville.—John McNelle's stable, owned by Mrs. Mary Couglar, Harford Rd.; loss \$3000.

Md., Gullford.—Maryland Granite Co.'s sheds and offices; loss about \$40,000.

Md., Jessup.—George H. Kaskendike's residence; loss \$5000.

Miss., Greenwood.—Bon Ton Restaurant, several stores and residences; total loss, \$7500.

Miss., Hattiesburg.—McInnis Lumber Co.'s shavings-house and boiler-room; loss about \$1500.

Miss., Magee.—Magee Courier Publishing Co.'s plant.

Miss., Seminary.—City Hall. Address The Mayor.

Mo., Kansas City.—Rothschild Clothing Co.'s store; building owned by Alfred P. and Louis Rothschild; loss \$5000.

Mo., Kansas City.—Sunny Slope Greenhouse, owned by Bryson S. Ayers; estimated loss, \$5000.

Miss., Meridian.—Doughtie Furniture Co.'s building damaged; loss \$30,000.

Mo., St. Louis.—James McClelland's residence at 6757 Wise Ave.; loss \$5000; Louis Steffen's residence at 6759 Wise Ave.; loss \$5000.

Mo., St. Louis.—Barnet, Craft & Kaufmann Milling Co.'s warehouse; Grolock Vehicle Material Co.'s plant; Lammert Furniture Co.'s warehouse; H. J. Heinz Co.'s warehouse; total loss about \$100,000.

N. C., Elizabeth City.—Elizabeth City Electric Light & Power Co.'s electric-light plant partly burned; loss about \$25,000.

N. C., Wilmington.—W. S. D. Eborn's cotton gin and sawmill; loss \$5000.

Okla., Antlers.—Dr. H. C. Johnson's building and two other structures; loss \$12,000.

Okla., Chickasha.—Ed. Goben's residence; Sigmon Furniture Manufacturing Co.'s plant; loss about \$3000.

Okla., Depew.—J. L. Moore's store; Pier-son Hotel; H. E. Frame's meat market; D. M. Virgin's store; total loss \$5900.

Okla., Hobart.—W. H. Roush & Son's store; building owned by W. H. Carleton.

Okla., Collinsville.—High-school building; loss about \$50,000. Address The Mayor.

Okla., Meeker.—Gulf, Colorado & Santa Fe Railroad's depot, F. Merritt, chief engineer, Galveston, Tex.; loss about \$5000.

S. C., Anderson.—Forest A. Pruitt's residence; loss about \$3000.

S. C., Charleston.—Charleston Fiber Co.'s plant.

S. C., Cheraw.—William Godfrey's residence; loss \$5000.

S. C., Cheraw.—M. B. Crigler & Co.'s machine-house at cottonseed-oil mill; estimated loss, \$30,000.

S. C., Cheraw.—William Godfrey's residence; loss \$7000 to \$8000.

S. C., Dillon.—W. C. Owen's residence.

S. C., Honea Path.—M. M. Wilson's residence; loss \$3500.

S. C., Leslie.—R. H. Cornwell's ginhouse and machinery; loss about \$1000.

S. C., Lexington.—Home National Bank, loss \$5000; Mrs. J. E. Kauffman's building, loss \$3000.

Tenn., Charleston.—Jefferson Bros.' store; Hambricht Drug Co.'s store; Cates Bros. & Co.'s store; T. C. Bolen's store; J. I. McCarty's store; postoffice; East Tennessee Telephone Co.'s exchange; total loss, \$30,000 to \$40,000.

Tenn., Jackson.—Union University's main building and Powell chapel.

Tenn., Jackson.—S. E. Wilson's store; loss \$5000.

Tex., Beaumont.—Deuster Furniture Co.'s warehouse.

Tex., Beaumont.—Deutzer Furniture Co.'s warehouse; loss about \$35,000.

Tex., Crockett.—Mary Allen Seminary annex; loss about \$20,000.

Tex., Dallas.—L. P. Griffin's residence at 1705 Gould St.; loss \$3000.

Tex., Farmersville.—St. George Hotel, W. H. Ritch, proprietor; loss \$6000.

Tex., Farmersville.—St. George Hotel; loss \$3000.

Tex., Honey Grove.—Dr. A. T. Reed's residence, loss \$7500; H. M. Smith's residence.

Va., Richmond.—Blinswanger & Co.'s plant for manufacturing sash, doors, blinds, etc.; loss reported as \$175,000.

Tex., Rockett, R. F. D. from Waxahachie.—Rockett Gin Co.'s cotton gin; loss about \$6000.

Tex., Ladonia.—Mrs. Rosa Barlow's residence on Mill St.; loss \$3000.

Tex., Waco.—A. J. Petoskey's cigar factory; loss \$3000.

Tex., Waco.—Kemendo Bldg.

Va., Bedford City.—Clark & Co.'s tobacco factory; loss \$50,000 to \$75,000.

Va., Charlottesville.—Mrs. J. A. Wine's apartment-house at High and 3d Sts., owned by Moses & Philip Letterman; loss about \$25,000.

Va., Lynchburg.—Lynchburg Foundry Co.'s machine shop, blacksmith shop and boiler-room; loss about \$40,000; H. E. McWane, president.

Va., Sangerville, R. F. D. from Bridge-water.—George Carico's broom factory.

W. Va., Gorman.—Tannery owned and operated by John G. Hoffman & Sons Company of Wheeling, W. Va.

W. Va., Athens.—Odd Fellows' building; W. W. Osborne's store and dwelling; John Cook's store; Dr. S. R. Holyrod's office, and several other buildings; loss \$15,000 to \$20,000.

W. Va., Northfork.—Flat Top Ice & Cold-Storage Co.'s plant, loss \$60,000; Tony & Thomas' store building, loss \$30,000; Hotel Northfork, loss \$20,000; Armour & Co.'s building, loss \$10,000; number of dwellings.

DAMAGED BY STORM

W. Va., Fairmont.—Baltimore & Ohio Railroad Co.'s bridge at Gaston Junction; F. L. Stuart, chief engineer, Baltimore, Md.

Association is planning to erect building during summer; character and cost of construction not determined. (Recently noted as Young Women's Christian Association building.)

Mo., St. Louis.—Young Women's Christian Association, Mrs. C. R. Springer, president, will inaugurate campaign to erect clubhouse to accommodate 500 young women; Mrs. C. C. Rainwater in charge of campaign; is also considering erection of new building for Woman's Christian Home at 1814 Washington Ave.

Tenn., Nashville.—Sigma Alpha Epsilon Society, Joseph H. Thompson, president, plans to erect chapter house at Vanderbilt University; cost about \$12,000.

Tex., Beaumont.—Beaumont Lodge No. 311, Benevolent Protective Order of Elks, will erect proposed lodge building; eight stories.

Tex., Dallas.—Dallas Central Labor Council is planning erection of proposed labor temple; Eugene Mitchell, member of committee.

Tex., Denison.—Woodmen of the World, J. M. Denton, secretary, 119 S. Rusk Ave., will receive bids until January 31 to erect two-story building; certified check for \$500; plans and specifications at Mr. Denton's office.

Tex., McKinney.—Benevolent Protective Order of Elks plans to erect lodge building to replace structure recently reported burned.

Tex., McKinney.—Ancient Free and Accepted Masons plan to erect lodge building to replace structures recently reported burned.

Tex., Rosebud.—Ancient Free and Accepted Masons will erect lodge building; three stories; brick and stone; lower floor for store; upper floors for lodgerooms.

Va., Suffolk.—Benevolent Protective Order of Elks is considering erection of lodge building; 53x200 feet; ordinary construction; steam heat; cost \$12,000; architect not selected. (See "Machinery Wanted.")

W. Va., New Martinsville.—Masonic Temple Association is planning to soon begin erection of proposed lodge, business and office building; three stories; J. B. Clark chairman of building committee.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ga., Savannah.—J. Levy will improve building at Oglethorpe Ave. and Barnard St.; will provide store on lower floor and apartments above.

Md., Baltimore.—Louis Kaha is having plans prepared by Frank & Kavanagh, 328 N. Charles St., Baltimore, for converting residence at 1800 Eutaw Pl. into apartment-house; inlaid parquetry floors; two baths to each apartment; marble corridors; passenger elevator.

Md., Baltimore.—R. B. Fentress has plans by Oliver B. Wight, 705 Munsey Bldg., Baltimore, for apartment-house on St. Paul St., near 27th St.; four stories; ornamental brick construction; 35x100 feet; pressed brick front; stone trimmings; galvanized iron cornices; electric lights; steam heat; slag roof; Morrow Bros., 218 W. Saratoga St., and Noel Construction Co., Calvert and German Sts., both of Baltimore, have been invited to estimate. (Lately mentioned.)

Md., Baltimore.—Samuel E. D. Stuart, 3020 Evergreen Ter., will erect addition to dwellings at 1405 and 1237 Mt. Royal Ave. and convert same into apartment-houses; each apartment to contain six rooms and private bath; Devau ball-bearing direct-line telephone system; cost about \$12,000.

Mo., Kansas City.—Thompson & Weaver are reported as to erect apartment-house at 43d and Locust Sts.; brick; cost \$100,000.

Mo., Kansas City.—Boulevard Realty Co., Henry J. O'Brien, president, will erect four four-story apartment-houses. (See "Hotels.")

Mo., St. Louis.—P. J. Driscoll will erect tenement-house at 3306-6a Chippewa St.; two stories; cost \$4000.

Mo., St. Louis.—Hagerman & Fitzsimmons Realty Co. will erect apartment, business and office building. (See "Bank and Office.")

Mo., St. Louis.—J. Charles Mueller, 3500 Herbert St., has plans by Edward F. Nolte, 1101 Fullerton Bldg., St. Louis, for nine apartment buildings; 29x50 feet; ordinary construction; furnace; electric lighting; cost \$7500 each; construction by owner. (Recently noted.)

N. C., Hendersonville.—Dr. A. H. Morey has plans by H. C. Meyer, Hendersonville,

for apartment, store and office building. (See "Stores.")

N. C., Wilmington.—J. M. Solky is reported as to erect apartment-house at 3d and Walnut Sts.; eight stories; probable cost \$100,000.

Okla., Muskogee.—Muskogee Realty Co., Fred Rains, secretary, has not completed plans nor made final arrangements for apartments building previously noted. (See "Stores.")

Okla., Oklahoma City.—Roy Bickle of Ardmore, Okla., is reported to erect apartment-house at 115 E. 8th St.; four stories.

Tenn., Nashville.—Halden A. Dodd, trustee, will erect apartment-house; four stories.

Tex., Cleburne.—John W. Floore, Sr., is having plans prepared for apartment-house at East Henderson and Willingham Sts.; two or three stories.

ASSOCIATION AND FRATERNAL

D. C., Washington.—Brotherhood of North American Indians, Richard C. Adams, general counsel, Bond Bldg., contemplates erection of building; white marble construction; cost \$850,000; plans reported being prepared by Albert Kelsey, Weightman Bldg., Philadelphia, Pa.

Ga., Athens.—Young Women's Christian Association has plans by Fred J. Orr, 712 Southern Mutual Bldg., Athens, for association building; two stories; stucco; shower baths, gymnasium, swimming pool, reading and rest rooms and accommodations for about 30 working girls; cost about \$15,000. (Recently incorrectly noted as Young Men's Christian Association.)

Ga., Dalton.—Frank Manly will erect 40x100-foot lodge, office and store building recently noted. (See "Stores.")

La., Covington.—Firemen's Benevolent Association, E. D. Kentzel, president, plans to erect hall for Bremen; L. M. Bourgeois, I. A. Alfonso and J. L. Smith, building committee.

La., Donaldsonville.—Lodge No. 1153, Benevolent and Protective Order of Elks, R. N. Slater, secretary, will not erect lodge building for several months. (Recently noted.)

Mo., Springfield.—Young Men's Christian

BANK AND OFFICE

Ala., Birmingham.—First National Bank's improvements to building (recently noted) include doubling size of present lobby, installing three-inch hexagon white ceramic tile floor, marble walls and decorated ceiling, replacing solid wall between bank lobby and building with plate-glass above marble wainscot with two entrances from building lobby on ground floor; contract for elevator enclosures and doors awarded.

Ala., Fort Deposit.—Frederick Ausfield, 1024 Bell Bldg., Montgomery, Ala., is preparing plans for bank building.

Ark., Little Rock.—Elkhorn National Bank will erect building; two stories; brick.

Ala., Tuscaloosa.—C. B. Verner and W. B. Oliver have plans for office and store building. (See "Stores.")

D. C., Washington.—Interstate Building Corporation will incorporate with J. W. Henry, president, 2137 R St. N. W.; Colin Livingstone, vice-president; J. C. Weedon, treasurer, 224 E. Capitol St.; Alexander McNell, manager; will erect office building at 1319-21 F St. N. W.; 60x200 feet; 10 stories; fireproof steel frame; press brick, terra-cotta and marble; electric elevators; steam heat; completed about October 1; cost \$350,000; plans by Milburn, Helster & Co., Home Life Bldg., Washington; plans ready about March 1.

Fla., Tampa.—Commercial Building Co., G. A. Petteway, president, will not erect 10-story office building at Florida Ave. and Twigg St., as previously reported; is having plans prepared by Bonfoy & Elliott, Tampa, for smaller building on same site.

Fla., Jacksonville.—Dodge Building Co. has plans by Mark & Sheftail, Jacksonville, for office building on Laura St. between Bay and Forsyth Sts.; 15 stories; 1900 square feet space on each floor; 23x105 feet; steel and reinforced concrete; fireproof; arched tile or reinforced concrete floors; foundation construction to include concrete piling, cantilever footings and massive continuous reinforced concrete slab; high-speed elevators; fire and burglar proof vaults. (Previously mentioned.)

Fla., Tampa.—Frank Bruen and C. E. Webb have plans by Joseph McNell for office building; 45x100 feet; two stories; mill construction; brick; cost \$18,000; construction by Mr. Webb. (Recently noted.)

Ga., Cartersville.—Bank of Cartersville will erect bank building at Main and Erwin Sts.

Ga., Dalton.—Frank Manly will erect 40x

100-foot office, store and lodge building recently noted. (See "Stores.")

Ga., Fitzgerald.—Third National Bank will erect bank building; Sayre & Baldwin, architects, 405 Bleckley Bldg., Anderson, S. C., in charge of work.

Ga., Florissa.—O. N. Duke will erect store and office building. (See "Stores.")

Ga., Vidalia.—Vidalia Loan & Trust Co. will erect three-story bank building.

Ky., Lexington.—Union Bank & Trust Co. will expend \$3000 to remodel building at Main and Upper Sts.

Ky., Pineville.—Pineville Amusement Co. is reported as to receive bids until January 29 to erect theater and office building. (See "Theaters.")

La., Lake Charles.—Leon Sugar will erect office building and printing establishment; bids opened and contract let about February 10. (See "Miscellaneous Enterprises.")

Md., Towson.—Towson National Bank will open bids January 29 for improvements to Piper Bldg. for banking purposes; contractors estimating are D. M. Andrew Company, Mt. Vernon Ave. and 26th St.; Daniel Harding, 15 E. Fayette St.; John Cowan, 106 W. Madison St., all of Baltimore, Md.; Philip Watts, Pikesville, Md.; plans by A. Cookman Leach, 223 N. Charles St., Baltimore, Md. (Previously mentioned.)

Miss., Hattiesburg.—J. T. Jones, president of Gulf & Ship Island Railroad, Gulfport, Miss., will erect, it is reported, two-story building adjoining Hotel Hattiesburg, to be occupied by four railroads entering Hattiesburg; ground floor for offices and Commercial Club; second floor as permanent exhibit hall for agricultural products.

Mo., Kansas City.—C. F. Ettwein will complete Mason Bldg. at 1108-10 Grand Ave.; will erect additional story of steel construction; cost \$5000.

Mo., St. Louis.—International Bank of St. Louis plans, it is reported, erection of bank and office building.

Mo., St. Louis.—Hagerman & Fitzsimmons Realty Co. is having plans prepared for business, office and apartment building at Grand and Lafayette Aves.; three stories; cost about \$100,000.

N. C., Charlotte.—Standard Oil Co., 26 Broadway, New York, will, it is reported, erect office building; 50x72 feet. (See "Miscellaneous Enterprises.")

N. C., Hendersonville.—Dr. A. H. Morey has plans by H. C. Meyer, Hendersonville, for office, store and apartment building; cost \$10,000. (See "Stores.")

N. C., Weaverville.—Farmers & Traders' Bank will erect bank building; one story; probably concrete-block construction.

Okl., Muskogee.—Muskogee Realty Co., Fred Rains, secretary, has not completed plans nor made final arrangements for store and office building previously noted. (See "Stores.")

S. C., Lexington.—Home National Bank will erect bank building to replace structure reported burned; loss \$5000.

Tenn., Knoxville.—W. H. Sterchi purchased French & Roberts Bldg. for about \$40,000, and will, it is reported, expend \$10,000 for improvements; will change front, provide new entrance to office floors, etc.

Va., Richmond.—Savings Banks of Richmond, L. Z. Morris, president, will make improvements to building; remodel interior, build new vault, etc.; plans are being prepared.

Va., Richmond.—Virginia Railway & Power Co. is having plans prepared by A. C. Bosson, 55 W. 33d St., New York, for office building at Franklin and 7th St.; 12 stories; fireproof; 110 feet deep; steel frame; stone finish for first two stories; upper stories probably of high-class brick; estimated cost about \$500,000. (Recently noted.)

Va., Richmond.—James J. Poirard and F. Percy Loth are reported as interested in erection of office building at 6th and Main Sts.; at least six stories.

Va.-Tenn., Bristol.—Anson King will open bids about February 15 to 20 to remodel theater as office building; 70x110 feet; ordinary or slow-burning construction; plans by C. R. Kearfott, Bristol. (Recently noted under "Theaters." See "Machinery Wanted.")

W. Va., Benwood.—Bank of Benwood will erect bank building at Main and Sixth Sts.

W. Va., New Martinsville.—Masonic Temple Association is planning erection of proposed office, business and lodge building (See "Association and Fraternal.")

CHURCHES

Ala., Birmingham.—Congregational Church will erect edifice; W. J. Lee, chairman of building committee.

Ala., Ensley.—Ensley Baptist Church will erect edifice at Avenue G and 18th St.; brick; cost \$11,000.

Fla., Orlando.—Methodist congregation plans to erect edifice; F. A. Curtis, T. J. Watkins, James L. Giles and others, building committee.

Ga., Savannah.—Southside Baptist Church, Rev. John S. Wilder, pastor and chairman of building committee, will erect edifice; 100x30 feet; basement under auditorium for Sunday-school rooms; main auditorium to seat 2000; inclined floor; gallery; hot-water heat; opera chairs; cost about \$40,000; will also erect parsonage. (Previously noted.)

Ky., Bowling Green.—Main Street Baptist Church will erect edifice. Address The Pastor, Main Street Baptist Church.

Ky., Henderson.—Methodist Episcopal congregation, Rev. J. A. Chandler, pastor, is reported as to receive bids through Mathew & Clark, architects, 705 Olive St., St. Louis, Mo., for edifice; one story; brick and stone.

Ky., Louisville.—Westminster Presbyterian and First Presbyterian churches, Rev. J. S. Lyons, pastor, will erect edifice at First and Ormsby Aves.; plans by Brinton B. Davis, Louisville; 80 feet wide; auditorium on main floor to seat 700; gallery to seat 400; white stone construction; French Renaissance; domed ceiling 83 feet high; Sunday-school department in rear.

La., Baton Rouge.—First Christian Church has plans by C. H. Charlton, McGuire Bldg., Baton Rouge, for edifice; 68x38 feet; gas steam Klow system of heating; tungsten electric lighting; cost \$7000; date of opening bids not set. (Recently noted.)

La., New Orleans.—Rev. A. Oscar Browne and Rev. C. S. Scholl are interested in erection of proposed Presbyterian churches at Lake View and Gentilly Terrace.

Md., Baltimore.—Emmanuel English Evangelical Lutheran Church, Rev. T. F. Hahn, pastor, Schroeder and Pierce Sts., will erect edifice at Edmondson and Warwick Aves.

Miss., Meridian.—First Presbyterian Church will erect edifice. Address The Pastor, First Presbyterian Church.

S. C., Orangeburg.—St. Paul's Methodist Episcopal Church, William L. Glaze, chairman of building committee, is having plans prepared by George W. Stewart, St. Petersburg, Fla., for Sunday-school building; 63x38 feet; two stories; brick and stone; steel trusses and posts; gallery iron railing.

Okl., Tulsa.—Lutheran church, Rev. C. W. Sifferd, will erect edifice; brick and stone; cost \$7000 to \$10,000.

Tenn., Fountain City.—Fountain City Baptist Church, Rev. J. A. Davis, pastor, will erect addition to edifice.

Tex., Dallas.—First and Memorial Baptist churches will consolidated and erect edifice. Address The Pastor, First and Memorial Baptist Church.

Tex., Sequin.—Lutheran congregation will erect edifice; F. C. Weinert, Wm. Steinmeyer, Thos. Lienann and others, committee.

Va., Clifton Forge.—Baptist Church, F. B. Westernman, chairman of building committee, will open bids in about four weeks to erect Sunday-school and industrial department; cost \$15,000; cost of heating plant, \$2000; plans by Heard & Caldwell, Lynchburg; address architect (Recently noted.)

W. Va., Grafton.—St. Paul's Lutheran Church, Rev. A. F. Richardson, pastor, is receiving bids through building committee for rebuilding edifice at cost of about \$5000; plans by Giesey & Faris, Schumacher Bldg., Wheeling, W. Va., are on file at T. E. Cole's store in Grafton, and call for Gothic type tower, several additional entrances, Gothic windows; construction of extension or offset for pulpit and altar on main church floor; lighted with leaded stained-glass windows, etc.

CITY AND COUNTY

Ala., Huntsville.—Jail.—Madison County Commissioners will open bids February 15 to make alterations and additions to county jail; plans by Frederick Ausfeld, 1024 Bell Bldg., Montgomery, Ala. (Previously noted.)

Ark., Fort Smith.—City Hall, etc.—City and Fort Smith District of Sebastian county will consider propositions to finance and build city hall and courthouse; cost \$250,000; John W. Howell, chairman. (Recently noted.)

Fla., Clearwater.—Jail.—Pinellas County Commissioners desire architects to submit plans and specifications for jail; C. W. Wicking, clerk. (Recently noted.)

Ga., Athens.—Jail and Jailer's Residence.—Clarke county Commissioners contemplate holding election April 3 to vote on \$200,000 bond issue to erect courthouse, jail and jailer's residence. (Recently noted to have defeated similar issue.)

Ga., Quitman.—Fire Department.—City voted bond issue for improvements to fire department; W. W. Walker, president of Citizens' Bank, and others, bond commission. (Noted in December.)

Ga., Summerville, P. O. at Augusta.—Engine-house.—Village council is having plans prepared for engine-house; cost \$10,000; A. Cuthbert, intendant.

Ky., Winchester.—City Building.—City purchased site to erect proposed municipal building; previously voted \$40,000 for this purpose.

La., New Orleans.—Engine House.—City is having plans prepared by E. A. Christy, New Orleans, for repairs to No. 2 Engine House on Julia St.

Md., Baltimore.—Bathhouse.—Board of Awards, James H. Preston, president, will receive bids at office of Richard Gwinn, City Register, City Hall, until 11 A. M. January 31 to erect public bathhouse at Harford and Greenmount Aves. and Monument St.; certified check for \$500, payable to Mayor and City Council; drawings and specifications at office of Clarence E. Stubbs, Inspector of Buildings; plans by Archer & Allen, Central Savings Bank Bldg., Baltimore. (Previously noted.)

Okl., Hobart.—City Hall and Auditorium.—City will erect city hall and auditorium; cost \$40,000; architect not selected. (Bond issue of \$100,000 recently reported voted for city hall, water-works and parks.)

Tenn., Chattanooga.—Jail.—Hamilton County Court authorized \$500,000 bond issue for courthouse and jail; bids for latter to be opened February 15; plans by Barnwell & Jones, Chattanooga. (See Contracts Awarded, "Courthouses.")

Tex., Fort Worth.—Hospital.—Dr. Charles H. Harris will erect hospital at Fifth Ave. and Rosedale Sts.; two stories; 30 rooms; opal glass spherical ceiling; karoolith floors; tapestry brick, trimmed with velvet black and white stone; vacuum steam heat; cost \$20,000; plans by and construction under supervision of Waller & Field, Fort Worth.

Va., Lynchburg.—Fire Station.—City plans to erect fire station on 12th St. Address The Mayor.

COURTHOUSES

Ark., Fort Smith.—City and Fort Smith District of Sebastian county will consider propositions to finance and build courthouse and city hall; cost \$250,000; John W. Howell, chairman. (Recently noted.)

Ga., Athens.—Clarke County Commissioners contemplate holding election April 3 to vote on \$200,000 bond issue to erect courthouse, jail and jailer's residence. (Recently noted to have defeated similar issue.)

DWELLINGS

Ala., Attalla.—J. R. Brown will erect residence; cost \$5000 to \$10,000.

Ala., Birmingham.—Stephen Smith will rebuild residence at Edgewood, reported burned; loss \$12,000.

Ala., Gadsden.—Laverty Bros. will erect dwellings in the spring; plans not made. (Recently noted.)

D. C., Washington.—John C. Delchman, 1520 E. Capitol St., will erect 11 two-story brick dwellings at 1200-16 5th St. N. E. and 412-14 M St. N. E.; cost \$27,500.

D. C., Washington.—H. R. Howenstein, 1314 F St. N. W., will erect 10 two-story brick dwellings at 816-18 6th St. N. E., 608 and 622 1 St. N. E., and 1890 to 1810 2d St. N. W.; cost \$28,500.

D. C., Washington.—H. A. Kite, 1333 G St. N. W., will erect eight dwellings at 1204 to 1210 and 1232 to 1238 Walter St. S. E., to cost \$15,200, and 10 at 1212 to 1230 Walter St., to cost \$17,000; two stories; brick.

D. C., Washington.—Harry Wardman, 1342 New York Ave. N. W., will erect four dwellings at 2014-20 Summit Pl. N. E., to cost \$9000, and 19 dwellings at 100-26 V St. N. W., to cost \$20,500; two stories; brick.

D. C., Washington.—Thrifty Building Co., Union Trust Bldg., will erect six dwellings at 701-711 Upshur Pl. N. E.; two stories; brick; cost \$18,000.

D. C., Washington.—Harry Wardman, 1342 New York Ave. N. W., purchased site on Harvard St., Columbia Rd. and Sherman Ave., and will erect 114 dwellings and 12 stores; cost \$300,000; dwellings to contain six rooms and bath.

D. C., Washington.—James T. Kenyon, 817 14th St. N. W., will expend \$2000 each to erect eight dwellings; 19x32 feet; ordinary construction; hot-air furnace; plans by Spelden & Spelden, 1403 New York Ave. N. W., Washington; construction by owner; subcontracts let. (Recently noted.)

D. C., Washington.—H. R. Howenstein, 1314 F St. N. W., has plans by L. T. Williams, 1389 F St. N. E., Washington, for dwellings; 20x40 feet; six rooms and bath; cost \$3500; construction by owner. (Recently noted.)

Ga., Atlanta.—Dr. Royal J. Miller will erect residence on Peachtree Pl.; cost \$4000.

Ga., Atlanta.—J. H. Whisenant, 885 Highland Ave., will erect two-story dwelling; cost \$2500; day labor.

Ga., Atlanta.—McD. Baldwin will erect one-story dwelling at 57 Waddell St.; cost \$3000.

Ga., Savannah.—Southside Baptist Church, Rev. John S. Wilder, pastor, will erect parsonage. (See "Churches.")

La., New Orleans.—Mrs. C. Bacot will erect cottage; cost \$2300.

La., New Orleans.—Mrs. B. Havard will erect residence; two stories; brick veneer; cost \$12,000.

La., New Orleans.—George Cousins will erect cottage; cost \$3555.

Md., Baltimore.—Robert White, general manager of City Baking Co., 500 Equitable Bldg., is having plans prepared by Lucius White, Powhatan and Edgewood Aves., Baltimore, for residence at Powhatan and Edgewood Aves.; two and a half stories; Natco hollow tile blocks; 60x200 feet.

Md., Baltimore.—Henry E. Cook, 2704 N. Calvert St., has plans by Jacob F. Gerwig, Equitable Bldg., Baltimore, for 12 dwellings on east side of Abell St. between 32d and 33d Sts.; two stories; ornamental brick; 15x50 feet; marble trimmings; construction by owner; cost \$21,600.

Md., Baltimore.—Sidney Wasserman, 2441 Woodbrook Ave., will erect dwelling on Calvert St. near 31st St.

Md., Baltimore.—Samuel B. Brusstar, 3204 E. Baltimore St., will erect residence at Carroll Rd. and Belair Ave.

Miss., Summit.—A. J. Hackett will erect number of cottages, etc. (See "Hotels.")

N. C., Charlotte.—E. D. Latta, president of Charlotte Consolidated Construction Co., plans to erect number of dwellings.

N. C., Kenilworth (not a postoffice).—Kenilworth Development Co. Incorporated by J. J. McCloskey of Asheville, N. C., and others; plans to erect bungalow. (See "Land Development.")

Okl., Oklahoma City.—H. L. Hicks will erect residence; two stories; cost \$4000.

Okl., Oklahoma City.—W. H. Vaden will erect California style bungalow on W. 31st St.

Okl., Oklahoma City.—John W. Shields will erect three bungalows to cost \$1500 to \$2000 each.

Okl., Oklahoma City.—J. W. Mann Realty Co. will erect bungalow and three two-story residences in Central Park addition; cost \$15,000; is planning to expend \$75,000 to erect residences in this section during the year.

S. C., Anderson.—Forrest A. Pruitt will rebuild residence reported burned at loss of about \$8000.

S. C., Greenville.—Raven I. McDavid will erect residence and garage on E. North St.; cost \$10,300.

S. C., Greenville.—T. F. Floyd will erect two dwellings on Townes St.; cost \$4000.

Tenn., Dayton.—Dr. J. F. Woodward will erect dwelling; two stories; brick; hot-water heat; electric lighting. (See "Machinery Wanted.")

Tenn., Memphis.—Joseph Newburger of Newburger Cotton Co. will erect residence.

Tenn., Memphis.—Boshvitz Bros. will erect two dwellings at 1319 and 1270 Tutwiler Ave.; cost \$5350.

Tex., Dallas.—M. C. Kersh will erect cottage at 3119 Hood St.; cost \$3500.

Tex., Dallas.—S. Kirkgard will erect residence at 723 Third Ave.; cost \$3000.

Tex., Dallas.—C. M. McNatt will erect residence at 916 Victor St.; cost \$3000.

Tex., El Paso.—Albert Rodriguez will erect two dwellings on Porfirio Diaz St.; cost \$3000.

Tex., Houston.—Russell Brown Company will expend \$2500 to \$5000 each to erect 12 dwellings; six to eight rooms; each; frame; shingle roof; plans and construction by owner. (Recently noted.)

Va.-Tenn., Bristol.—W. H. Cox has plans by Clarence B. Kearfott, Bristol, for dwelling; brick veneer; hardwood finish; metal shingle roof; colonial porch columns; marble trimmings; cost \$3500.

GOVERNMENT AND STATE

Md., Frostburg.—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., opened bids to

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

erect postoffice building; King Lumber Co., Charlottesville, Va., is lowest bidder at \$44,724, which exceeds \$40,000 appropriation; will consider bids to determine if change in material will bring same within appropriation. (Previously noted.)

Mo., Jefferson City—Cellhouse.—State Board of Prison Inspectors accepted plans by H. H. Hobenschild of Rolla, Mo., and Harry Clymer, 105 N. 7th St., St. Louis, Mo., for cellhouse; cost about \$350,000. (Previously noted.)

S. C., Gaffney—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., opened bids to erect postoffice building; Newport Contracting & Engineering Co., Newport News, Va., is lowest bidder for limestone construction at \$55,363, and Algernon Blair lowest bidder for sandstone construction at \$57,000. (Recently noted.)

S. C., Union—Postoffice.—Treasury Department, Office of the Supervising Architect, Washington, D. C. Proposals received in this office until 3 P. M. on February 27, and then opened, for construction (including plumbing, gaspiping, heating apparatus, electric conduits and wiring, and interior lighting fixtures) of United States postoffice at Union, S. C.; building to be one story and basement; about 4117 square feet ground area; brick faced; stone trimmings; tin roof; copies of drawings and specifications may be obtained from office of custodian of site at Union, S. C., or at this office, at discretion of Supervising Architect, James Knox Taylor. (Previously noted.)

Tex., Fort Bliss—Hospital.—Constructing Quartermaster, Fort Bliss, will receive bids until 11 A. M. January 26 to erect horse hospital; cost about \$300; information on application.

Va., Fort Monroe—Hospital.—Bids in triplicate will be received until 10 A. M. February 15 to erect addition to Post Hospital at Fort Monroe, including plumbing, heating and electric wiring and fixtures; for convenience of New York bidders plans and specifications may be seen in office of Chief Quartermaster, Eastern Division, Governor's Island, New York; deposit of certified check for \$50 required for plans and specifications; information on application; R. B. McBride, Captain and Quartermaster, U. S. A., Constructing Quartermaster.

HOTELS

Ark., Jonesboro.—J. P. Grady of Kansas City, Mo., is reported as to erect \$30,500 hotel; three stories.

Fla., Chumuckla.—Chumuckla Mineral Springs Hotel Co. incorporated with \$200,000 capital stock; R. O. Hoffman, president; R. L. Bryan, vice-president; H. S. Bryan, secretary-treasurer; will erect hotel; plans are being prepared by Alfred & Alfred, Pensacola, Fla.

Ga., Savannah.—Hotel Tybee Co. will improve hotel; install 200 additional bathrooms, improve servants' quarters, erect pergola, etc.

Ky., Harrodsburg.—B. Casey A'lin is planning to improve Graham Springs Hotel to accommodate 50 additional guests; will provide dining hall, bathrooms, 2 additional sleeping apartments, construct artesian well, etc.

Ky., Louisville.—Victoria Hotel Co. is having plans prepared by Fred Erhart, Norton Bldg., Louisville, for addition to hotel; four stories; 65x75 feet; cost \$50,000.

Miss., Meridian.—R. A. Thorne will erect two additional stories to Union Hotel.

Miss., Summit.—A. J. Hackett will improve Godbold Mineral Wells Hotel, erect number of cottages, etc.

Mo., Kansas City.—John H. Van Closter, proprietor of Avilon Hotel, 609 E. 9th St., is reported as to erect hotel near 12th and Wyandotte Sts.; 200 rooms.

Mo., Kansas City.—John Kling, Grant Renne and H. B. Allen are having plans prepared by Sanneman & Van Trump, Kansas City, for store and hotel building at 12th St. and Baltimore Ave.; six stories; cost \$100,000. (Previously noted.)

Mo., Kansas City.—Boulevard Realty Co., Henry J. O'Brien, president, purchased site 200x227 feet and will erect hotel and four apartment-houses; former six stories; latter each four stories; total cost of buildings about \$300,000.

N. C., Kenilworth (not a postoffice).—Kenilworth Development Co. incorporated by J. J. McCloskey of Asheville, N. C., and others; plans to construct 200-room \$50,000 hotel, clubhouse, bungalows, etc. (See "Land Developments.")

N. C., Troy.—Linthicum & Rose, Raleigh, N. C., are preparing plans for proposed hotel to cost about \$30,000.

N. C., Wilmington.—J. H. Hinton has

plans for additional story to Orton Hotel; 25 rooms, equipped with baths, steam heat and telephone connections.

N. C., Winston-Salem.—Sanford Edie, 1340 I St. N. W., Washington, D. C., purchased Hotel Webster for about \$40,000 and will improve; will discontinue store rooms on first floor and equip for dining-room and kitchen; will install private baths, etc.

S. C., Loris.—P. C. Prince will open bids February 1 to rebuild hotel and store; 50x75 feet; ordinary construction; heaters; lighting not determined; cost \$5000. (Recently reported burned.)

Tenn., Memphis.—Alfred Hach is reported as having plans prepared by Harker & Cairns, Memphis, for hotel at Raybourn Blvd. and Calhoun Ave.; three stories; brick; stone trimmings; 44 rooms; cafe and dining-room; brick; stone trimmings; 50x120 feet; cost \$40,000.

Tenn., Memphis.—Isela Bros. are reported as to erect hotel to replace Arlington Hotel; 250 to 300 rooms; cost \$300,000; also reported as having plans prepared by Jones & Furlinger, Memphis, for hotel opposite union station; 30 rooms; brick; stone trimmings; 35x100 feet; cost \$20,000.

Tex., Plainview.—Donohoo & Ware, owners of Citizens' National Bank and Ware Hotel building, will make improvements to hotel; will remove lobby from third to ground floor, install elevator and roof garden, etc.

Va., Newcastle.—Virginia Mineral Springs Co. organized with E. N. S. Lee president and W. T. Graham secretary; purchased Ripley Springs and several hundred acres of land adjoining; will dismantle, remove and rebuild Craig City Inn, paint same, install electric wiring for lamps, water fixtures for hot and cold water in each room, etc.

MISCELLANEOUS

Ga., Atlanta.—Clubhouse.—Automobile Club of Georgia, G. W. Hanson, president, has made no definite plans for clubhouse recently noted.

Md., Baltimore.—Clubhouse.—Baltimore Yacht Club, Isaac E. Emerson, commodore, Hotel Emerson, Baltimore and Calvert Sts., plans to erect clubhouse.

Md., Baltimore.—Motordome.—Howard A. French, 304 W. Baltimore St., Baltimore, and Jack Prince, Los Angeles, Cal., plan to erect motordome; plans to construct three-lap board track at angle of 45 degrees, with quarter mile cinder track for athletic events inside saucer; tiers of seats circling board track with seating capacity of 4000. (Recently noted.)

Md., Baltimore.—Restaurant.—Samuel E. D. Stuart, 3020 Evergreen Ter., will erect restaurant building at 306 E. Baltimore St.; two stories and basement; fireproof; front of Grecian architecture of pink Milford granite and tapestry brick; structural steel and reinforced concrete frame; lower-floor walls decorated with Pentellean marble; tiled floors and frescoed beam ceilings; second floor to be marble and tile; dome composed of mosaic panels, art glass and prism lights in center of roof; Tiffany electric-lighting fixtures; cost \$35,000; will be leased to Manhattan Lunch Co. of New York; W. H. McElfrick, consulting architect, 701 Seventh Ave., New York.

Md., Dundalk (not a postoffice).—Clubhouse.—Maryland Swimming Club (Thomas K. Barrett, 16 E. Hamilton St., interested) will open bids about March 1 to erect building for club purposes; 36x50 feet; basement, 36x72 feet, to be used as canoe house; concrete and mill construction; cost \$4000; plans by Mottu & White, 324 N. Charles St., Baltimore. Address architects.

Miss., Hattiesburg.—Exhibit Hall.—J. T. Jones, president of Gulf & Ship Island Railroad, Gulfport, Miss., will erect exhibit hall and office building. (See "Bank and Office.")

Mo., Kansas City.—Show Buildings.—American Royal Live Stock Association will erect show buildings in West Bottoms.

Mo., Kansas City.—Infirmary.—Wesley Hospital, 11th and Harrison Sts., will erect infirmary; five stories; fireproof; 100 rooms.

Mo., St. Louis.—Turnverein.—Linwood Turnverein contemplates erecting addition to building; about 25x50 feet.

N. C., Charlotte.—Stable and Wagon Shed.—Standard Oil Co., 26 Broadway, New York, will, it is reported, erect stable 32x59 feet and wagon shed 20x64 feet. (See "Miscellaneous Enterprises.")

N. C., Durham.—Home.—North Carolina Children's Home Society, W. B. Streeter, superintendent, Greensboro, N. C., requests bids (on labor only) from contractors during February for opening March 14 to erect home for homeless children recently noted;

two stories and basement; 80x80 feet; basement 100x100 feet; fireproof construction; heating, lighting, etc., not determined; cost \$30,000; plans by W. L. Brewer, Greensboro, N. C., will be ready by February 1; material furnished by society. (See "Machinery Wanted.")

N. C., Kenilworth (not a postoffice).—Clubhouse.—Kenilworth Development Co. incorporated by J. J. McCloskey of Asheville, N. C., and others; plans to erect clubhouse, etc. (See "Land Developments.")

N. C., Raleigh.—Hospital.—Dr. F. T. Meriwether will erect addition to hospital on Grove St.

N. C., Wilmington.—Sanatorium.—Wilmington Chapter, National Red Cross Society, Mrs. Cuthbert Martin, president, will have plans prepared by Joseph F. Leitner, Wilmington, for tuberculosis sanatorium.

S. C., Charleston.—Sanatorium.—Baker-Craig Sanatorium, A. E. Baker, president, will open bids February 19 to erect sanatorium; 70x116 feet; three stories; pressed brick; limestone trimmings; Spanish renaissance; kitchen, dining-rooms, cold-storage rooms, laundry, power plant, etc., in basement; two elevators; fireproof construction; two outside fire-escapes; cost \$75,000; plans by J. D. Newcomer, 32 Broad St., Charleston, who will receive bids, and E. V. Richards, Bennettsville, S. C.; certified check for \$1000, payable to Mr. Newcomer, and plans may be obtained from him on deposit of \$25. (Recently noted.)

Va., Lynchburg.—Skating Rink.—J. L. Crist will rebuild skating rink; 75x200 feet; frame; stoves; electric lighting; cost \$7000. (Recently noted burned.)

Va., Virginia Beach.—Auditorium.—Virginia Baptist Summer Encampment, Joseph T. Watts, secretary, 601 Travelers' Bldg., Richmond, Va., will receive bids about March 1 to erect auditorium; plans by P. P. Pilcher, Richmond, Va.; contemplate construction by April 1. (Previously noted.)

W. Va., Elm Grove.—Milk Depot.—Lawrence Walber of Linton's addition will erect milk depot on Main St.

W. Va., Huntington.—Chamber of Commerce.—Chamber of Commerce plans to erect \$100,000 building; John T. McClintock, D. B. Gwinn and C. W. Phillips, committee.

W. Va., Warwood.—Skating Rink.—Warwood Amusement Co. is receiving bids to erect addition to Lash's Hall; 48x132 feet; will establish skating rink.

W. Va., Wheeling.—Car Barn.—Wheeling Traction Co. will erect car barn at Glenova.

RAILWAY STATIONS

Ala., Chapman.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., will, it is reported, erect depot.

N. C., Concord.—Board of Aldermen rejected plans submitted by Southern Railway for depot. (Recently detailed.)

Okla., Ada.—St. Louis & San Francisco Railroad, F. G. Jonah, chief engineer, St. Louis, Mo., will erect passenger depot; cost \$15,000 to \$25,000.

S. C., Spartanburg.—Carolina, Clinchfield & Ohio Railway of South Carolina, M. J. Caples, vice-president and general manager, Johnson City, Tenn., will, it is reported, erect freight depot on N. Church St.

Tex., Sweetwater.—Texas & Pacific Railroad, R. S. Wathen, chief engineer, Dallas, Tex., will erect freight depot and remodel present structure for passenger depot exclusively.

W. Va., Wellsburg.—Pennsylvania Railroad, Alex. Shand, chief engineer, Philadelphia, Pa., will, it is reported, erect freight depot.

SCHOOLS

Ala., Florence.—State Normal College, James K. Powers, president, will open bids February 10 to erect dormitory; 170x70 feet; ordinary construction; steam heat; cost \$40,000; plans by Frank Lockwood, Montgomery, Ala. (Previously noted.)

Ark., Argenta.—City will soon begin erection of high school building; lower floor to contain eight classrooms, superintendent's office and library; second floor will contain auditorium to seat 600 to 700 pupils; lecture-room and laboratories on third floor; cost about \$100,000. (Recently noted.)

Fla., Gainesville.—State University of Florida is having plans prepared by William A. Edwards, Candler Bldg., Atlanta, Ga., for Peabody building; two stories and attic; 136x70 feet; steam heat; cost \$50,000; plans will be ready in about 60 days. (Previously noted.)

Fla., Tampa.—City will receive bids until 4 P. M. February 4 to erect addition to Mich-

igan Avenue School; certified check for 5 per cent. amount of bid; plans and specifications at office of A. L. Shaw, architect, 508 1/2 Franklin St., Tampa; two stories and basement; accommodations for 200 students. (Recently noted.)

Fla., Tallahassee.—State Board of Control will open bids about March 1 to erect college dormitory; 200x50 feet; brick; steam heat; cost \$45,000; plans by W. A. Edwards, Atlanta, Ga.; P. K. Yonge of Pensacola and Jacksonville, Fla., may be addressed.

Ga., Thomasville.—City defeated \$30,000 bond issue for school improvements; J. M. Dekle, Mayor. (Recently noted.)

Ga., Quitman.—City voted bond issue to erect school; W. W. Walker, president of Citizens' Bank; R. C. McIntosh, vice-president of South Georgia Railway, and H. W. Stubbs, cashier of Bank of Quitman, bond commission. (Noted in December.)

La., New Orleans.—E. A. Christy, city architect, submitted preliminary plans to J. M. Gwinn, superintendent of city schools, for proposed McDonogh School No. 14; 21 rooms; two stories; brick; clock in dome; cost about \$100,000; is preparing plans for Twelfth Ward Industrial School, and will prepare plans for school in rear of Third Ward.

Miss., Brooklyn.—Board of Trustees of Forest County Agricultural High School, E. J. Currie, president, Hattiesburg, Miss., will expend \$12,000 to \$14,000 to erect auditorium and dormitory; accommodations in two buildings for 160; two stories; brick; steam heat; electric lighting; architect not selected. (Recently noted at Hattiesburg, Miss., to receive and examine plans February 30.)

N. C., Charlotte.—School Commissioners, J. Lee Phillips, chairman, rejected all bids to erect five schools and remodel and heat one, as bids exceeded appropriation; plans by Hook & Rogers and Hunter & Gordon, all of Charlotte; new bids will be opened February 13. (Recently noted.)

N. C., Gastonia.—City contemplates voting on bond issue for \$2500 for schools. Address The Mayor.

North Carolina.—North Carolina Synod of the Evangelical Lutheran Church appointed following commission for consideration of sites, etc., for location of proposed woman's college to be controlled by the Synod and to be within bounds of same; John Rehder, Wilmington, N. C.; M. Thompson, Lexington, N. C.; John Rutledge, Concord, N. C., and others.

N. C., Durham.—City voted \$50,000 bond issue for school improvements. Address The Mayor. (Previously noted.)

N. C., Nashville.—Nash County Board of Education will receive bids until February 15 through S. F. Austin, County Superintendent, to erect two schools; turnkey jobs; ready for use; 24x36 feet; 14-foot pitch; celled overhead and on sides with not less than 11-16 ceiling; two coats of good paint in addition to priming inside and out; rooms to have five windows; 12 lights 12x18; transom, 3 lights 12x18; cloakroom and vestibule one window each, 12 lights 16x16; buildings for Carter School No. 3, white, Rocky Mount township, and Strickland School No. 1, colored, Jackson township; construction in accordance with plans approved by State Superintendent of Public Instruction.

N. C., Raeford.—City voted tax to establish graded school to supplant Raeford Institute; high school will be established in connection. Address The Mayor.

N. C., Salem, P. O. Winston-Salem.—City will erect school building; plans ready in about 60 days; J. Calvin Tuttle, clerk and treasurer; F. A. Fogle, Mayor. (Bond issue of \$30,000 recently reported voted.)

Okla., Collinsville.—School Board will rebuild 12-room school reported burned; also erect one or two new school buildings.

Okla., Oklahoma City.—Oklahoma county has plans by F. E. Faberquist, Oklahoma City, for proposed county school adjacent to Fair Park; cost \$12,000.

Tenn., East Lake.—County Board of Education will erect school; 70x104 feet; two stories and basement; gravity steam heat; plans prepared by Huntington & Sears, James Bldg., Chattanooga, Tenn. (Recently noted.)

Tenn., Jackson.—Union University trustees will rebuild main building and Powell chapel reported burned; cost about \$100,000.

Tex., Alta Loma.—Alta Loma Independent School District will issue \$14,000 of bonds April 1 to erect school building; plans not made; W. H. Cushing, secretary of School Board. (Bond issue of \$14,000 previously noted.)

Tex., College Station.—Agricultural and Mechanical College, Walton Petee, president

will erect dining-room, kitchen, bakery, etc., to replace burned structure previously noted; seating capacity 1000; kitchen and bakery to be large enough to prepare food for 2500; building to be of reinforced concrete, with faced brick; tile roof supported by steel trusses; pressed steel ceiling; maple floors in dining-room; sanitary fireproof material in kitchen; metal doors and window frames and doors; plans by F. E. Giesecke, college architect. (See "Machinery Wanted.")

Tex., Denton.—State Normal School Board of Regents, Austin, Tex., will receive bids until noon January 30 to erect brick and stone library and gymnasium building and heating and plumbing and wiring for same; certified check for \$1000, payable to F. M. Bralley, president of board; certified check for \$100 with bids for heating, plumbing and wiring; plans at office of Enfrass & Walsh architects, Bosche Bldg., Austin, Tex., and president of Normal School at Denton, or may be had on deposit of \$25.

Tex., Frankston.—School Board, J. F. Austin, president, will receive bids until 9 A. M. January 26 to erect six-room two-story brick school; certified check for \$300; plans and specifications at office of Mr. Austin at Frankston or of A. C. Watson, architect, Austin, Tex.

Tex., Greenville.—Trustees of Wesley College adopted plans by George Lindsey, Greenville, for proposed administration building and two dormitories; administration building to contain classrooms, library, president's office, gymnasium, auditorium to seat 500; dormitories each to have 65 rooms; steam heat.

Tex., McNeill.—School District No. 9, comprising Merrittown and McNeill communities, will vote February 10 on special tax to rebuild and remodel McNeill school and employ additional teachers at Merrittown school; Wade M. Smith, Jr., County School Superintendent, Austin, Tex.

Tex., Richmond.—Richmond Independent School District will again vote on \$20,000 bond issue to erect high school; recent election declared illegal. Address District School Trustees. (Recently noted.)

Tex., Riviera.—City will award contract February 8 to erect proposed \$10,000 school. Address The Mayor.

Va., Abingdon.—Trustees of Martha Washington College will probably award contract to A. G. Kiser, Tazewell, Va., to erect dormitory and music-rooms; 48x128 feet; four stories; ordinary construction; brick and wood; hot-water heat; electric lighting; cost \$25,000; plans by Baumann Bros., Knoxville, Tenn. (Recently noted.)

Va., Emory.—Emory and Henry College will probably award contract to A. G. Kiser, Tazewell, Va., to erect college building; cost \$10,000. (Recently noted.)

Va., Ivanhoe.—School Board, J. H. Huddle, clerk, will erect school building; 49x83 feet; two stories and basement; brick; stucco trimmings; tin roof; metal cornices; cost \$12,000; plans by Clarence B. Kearfott, Bristol.

STORES

Ala., Birmingham.—Ike Adler will expend \$600 to repair building at Morris Ave. and 20th St.

Ala., Birmingham.—T. H. Molton contemplates rebuilding structure reported burned; plans not determined.

Ala., Birmingham.—J. B. Haffey will erect two buildings at 1721 Fourth Ave. North; one story; brick; cost \$4435.

Ala., Cullman.—The Jaggars Company, C. O. Jaggars, president, will award contract about October 1 for erection of two-story 60x90-foot fireproof brick structure for merchandising. (See "Cotton Compresses and Gins.")

Ala., Tuscaloosa.—Harry N. Eddins purchased store building recently damaged by fire, and will remodel.

Ala., Tuscaloosa.—C. B. Verner and W. B. Oliver have plans by E. J. Ostling for store and office building; two stories; 22x100 feet; ordinary construction; brick; hot-air furnace; cost \$4000; construction by owners. (Recently noted.)

D. C., Washington.—Harry Wardman, 1342 New York Ave. N. W., will erect 12 stores. (See "Dwellings.")

Fla., Dundee.—T. J. Rabon is receiving bids to erect store building; 30x60 feet.

Fla., Macclenny.—Hale & Stein will erect block of brick stores.

Fla., Jacksonville.—Calvin Brown will erect three two-story frame buildings on Franklin St. between Lorré & Howard Sts.

Fla., Jacksonville.—Coons & Golder will erect two buildings at State and Newnan Sts.; two stories; frame.

Ga., Atlanta.—Joseph Refenstein will erect two-story brick building at 1161 Peachtree St.; cost \$12,000.

Ga., Dalton.—Frank Manly will erect 40x100-foot store, office and lodge building; brick; ordinary construction; probably steam heat. (Recently noted under "Motors and Garages." See "Machinery Wanted.")

Ga., Davisboro.—A. R. Aldred will rebuild store reported burned; occupied by J. M. Brown; size, 28x90 feet; brick; cost \$3000; is ready to receive bids.

Ga., Flovilla.—O. M. Duke will erect store and office building; brick; lower floor for stores; upper floor offices.

Ga., Rome.—W. H. Wilkerson will erect store building.

Ga., Savannah.—J. Levy will improve building at Oglethorpe Ave. and Barnard St. (See "Apartment-houses.")

Ky., Lexington.—J. Arthur Graves will remodel and extend buildings at 114-16 S. Upper St.; will install new front, new flooring, erect addition in rear, etc.

La., Hammond.—James M. Carpenter Real Estate Co., representing January estate, owner, is having plans prepared for reconstruction of buildings at 416-30 N. 6th St. recently damaged by fire.

La., New Orleans.—Mrs. H. C. Robinson will erect building on Peniston St.; double; two stories; frame; cost \$5100.

Md., Baltimore.—George Habbersett, 429 S. Broadway, is having plans prepared for store and warehouse at Howard and Fayette Sts. (See "Warehouses.")

Miss., Laurel.—A. Marcus has plans for business building; two stories; brick.

Mo., Carthage.—James Lake contemplates remodeling building; will probably extend same back and reduce from three to two stories.

Mo., Kansas City.—Felix & Sons have plans, it is reported, by Smith, Rea & Lovitt, Kansas City, for store building at 1109 Walnut St.; brick; cost \$50,000. (Previously noted.)

Mo., Kansas City.—John Kling, Grant Renne and H. B. Allen are having plans prepared by Sanneman & Van Trump, Kansas City, for store and hotel building. (See "Hotels.")

Mo., St. Louis.—Client of Delor Real Estate Co. awarded contract to Stephens & Pierson, St. Louis, to erect store building.

Mo., St. Louis.—Shepley estate will remodel building at northwest corner of 10th and Olive Sts. for M. J. Steinberg Hat & Fur Co.

Mo., St. Louis.—Hagerman & Fitzsimmons Realty Co. is having plans prepared for business, office and apartment building. (See "Bank and Office.")

N. C., Hendersonville.—Dr. A. H. Morey will expend \$10,000 to erect store, office and apartment building; 40x110 feet; ordinary construction; steam heat; interlocking sidewalks; plans by H. C. Meyer, Hendersonville. (F. V. Hunter and Dr. A. H. Morey recently noted to erect building.)

N. C., Hickory.—Blackwelder & Riddle will erect store and theater building; bids opened January 22. (See "Theaters.")

Okla., Muskogee.—Muskogee Realty Co., Fred Rains, secretary, has not completed plans nor made final arrangements for 95x100-foot store and office building, 60x100-foot apartment-house and 100x100-foot business building. (Previously noted.)

Okla., Oklahoma City.—Dr. J. T. Alexander will erect store building at 16th St. and Lott Ave.; cost \$3000.

S. C., Columbia.—Consolidated Holding Co. purchased building on Main St. for \$80,000; will install new front, etc.

S. C., Loris.—P. C. Prince will rebuild store and hotel recently reported burned. (See "Hotels.")

Tenn., Chattanooga.—R. J. Miller Drug Co., W. 9th and Chestnut Sts., will expend about \$25,000 for improvements to drug store, including \$15,000 soda fountain, \$5000 worth of fixtures, all purchased, etc.

Tenn., Memphis.—Hessig-Ellis Drug Co., 107-111 S. Main St., has plans by John Gaisford, Memphis, for business building at McCall Ave. and Front St.; eight stories; steel, with reinforced concrete and brick; cost \$150,000.

Tenn., Memphis.—R. Brinkley Snowden has plans by Harker & Cairns, Memphis, for theater and store building. (See "Theaters.")

Tenn., Memphis.—Cumberland Telephone & Telegraph Co., Leland Hume, general manager, Nashville, Tenn., is considering erection, it is reported, of two additional stores to building on Madison Ave.

Tenn., Pulaski.—T. W. Pittman will not erect business building, as recently reported.

Tex., Colorado.—Lasker Real Estate Co., Galveston, Tex., will erect block of business buildings to replace structures previously burned.

Tex., Dallas.—Harris-Lipsitz Company will expend \$50,000 to erect 65x80-foot store building; mill construction; cost of heating plant, \$4000; plans by C. D. Hill & Co., Dallas. (Recently noted.)

Tex., Dallas.—J. Chase will expend \$5000 to erect three store buildings; one story each; 24x70 feet; total outside, 72x70 feet; ordinary construction; brick walls; cement floors; steel ceiling; composition roof; plate-glass fronts. (Recently noted.)

Tex., Port Arthur.—W. C. Tyley has plans for business building; cost \$20,000 to \$25,000.

Tex., Rosebud.—Ancient Free and Accepted Masons will erect store and lodge building. (See "Association and Fraternal.")

Va., Staunton.—John D. Bailey will, it is reported, erect business building at Central Ave. and Frederick St.

W. Va., Huntington.—J. G. McCrory of New York awarded contract to Clell Smith, Huntington, to erect store to replace burned structure; plans by W. B. Smith, Huntington.

W. Va., Keystone.—E. L. Shuffelbarger, architect, Princeton Ave., Bluefield, will receive bids until January 26 to erect business building for Wagner & Bohm; three stories; brick; plans and specifications at architect's office.

W. Va., New Martinsville.—Masonic Temple Association is planning erection of proposed business, lodge and office building. (See "Association and Fraternal.")

W. Va., Williamson.—Juhling Bros. will erect store and office building; two stories; brick. (See "Machinery Wanted.")

THEATERS

Ky., Pineville.—Pineville Amusement Co. is reported as to receive bids about January 29 to erect theater and office building; two stories; 50x150 feet; probable cost, \$30,000; plans by C. C. and E. A. Weber, 414 Walnut St., Cincinnati, Ohio.

La., New Orleans.—Bert Gagnon, manager of Lyric Theater, plans, it is reported, erection of theater for Gagnon-Pollock Stock Co.

La., New Orleans.—New Orleans Railway, Light & Power Co., Hugh McCloskey, president, will enlarge theater and make other improvements at Spanish Fort.

N. C., Charlotte.—R. D. Craver and associates will erect vaudeville theater; three stories.

N. C., Hickory.—Blackwelder & Riddle will expend \$20,000 to erect theater and store building; 86x100 feet; ordinary construction; cost of heating plant, \$500; cost of elevator, \$500; bids opened January 22. (Recently noted.)

N. C., Raleigh.—Aronson & Brown will make improvements to Almo Theater; plans call for arcade entrance with tile flooring and marble and tile side walls; marble box office; redecorating ceiling and walls; replace metal front with marble and white tile; plastic ornamentation; interior to be altered from 13-foot pitch to 25-foot; girder effect with rounding ceiling; plastic figures supporting girder over 12 feet apart; cork

carpet 25x36 feet; cost \$5000; contractors are desired to submit bids. (See "Machinery Wanted.")

Tenn., Memphis.—R. Brinkley Snowden has plans by Harker & Cairns, Memphis, for theater building on S. Main St.; 100x148½ feet; fireproof; reinforced concrete construction; entire front of terra-cotta; lobby and stores on first floor; lobby 14½ feet wide, of marble and glass; tile flooring; seating capacity, 1200; three stories.

WAREHOUSES

Ala., Montgomery.—Atlantic Compress Co., Atlanta, Ga., will not erect warehouse, as recently stated.

Ark., Gravette.—Ozark White Lime Co., Fayetteville, Ark., will erect warehouse and storage-room; 60x150 feet; plans not fully determined.

Ga., Atlanta.—Atlanta, Birmingham & Atlantic Railroad, Alex. Bonnyman, general manager, Atlanta, Ga., will erect warehouse about 300x70 feet; five stories; 100,000 square feet of floor space; bids invited within two weeks; is reported as to probably erect battery of warehouses.

Ga., Fitzgerald.—Farmers' Warehouse & Fertilizer Co. incorporated with \$25,000 capital stock by C. A. Newcomer, August Demiel, James Fletcher and others.

Md., Baltimore.—George Habbersett, 429 S. Broadway, is having plans prepared by A. Lowther Forrest, 405 Hoffman Bldg., Baltimore, for warehouse and store at Howard and Fayette Sts.; six stories; about 30x64 feet; ornamental brick construction; plate-glass windows; stone facings; concrete foundation.

Mo., St. Louis.—J. D. Goldman will erect warehouse at 303-05 S. Wharf; four stories; cost \$12,000.

Mo., St. Louis.—Collins estate will erect warehouse on Washington Ave. for Martin Shaughnessy, Adolph Erker and John J. Lane; plans by William H. Green, Chemical Bldg., St. Louis; glazed white terra-cotta front; 100x150 feet; reinforced concrete construction; five stories; cost \$150,000.

N. C., Charlotte.—Standard Oil Co., 26 Broadway, New York, will, it is reported, erect 40x100-foot warehouse. (See "Miscellaneous Enterprises.")

Tenn., Memphis.—Memphis Warehouse Co., H. W. Drane, secretary, plans to expend \$400,000 to \$500,000 to enlarge and improve warehouse facilities.

Tex., Aransas Pass.—Aransas Pass Channel & Dock Co. will construct galvanized-iron warehouse containing 75,000 feet of floor space, and 30-foot wharf beside warehouse; cost \$25,000.

Tex., Brenham.—Dr. Theo. Schirmacher will, it is reported, erect warehouse.

Tex., El Paso.—Myers Company, 310 S. El Paso St., will increase capital stock from \$20,000 to \$40,000; portion of increase for improvements to warehouses at 505-07 Santa Fe St.

Tex., Fort Worth.—Fort Worth Paper Co., J. A. Fisher, president, will erect building; steel and reinforced concrete; two stories and basement; supporting capacity 500 pounds to square foot.

Va., Norfolk.—Texas Company, Houston, Tex., will erect additional warehouses, etc. (See "Miscellaneous Enterprises.")

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Mo., St. Louis.—Anheuser-Busch Brewing Association, 512 Benoist Bldg., awarded contract to erect store and apartment building. (See "Stores.")

ASSOCIATION AND FRATERNAL

Ky., Nicholasville.—Knights of Pythias will expend \$4500 to erect home; 36x48 feet; two stories; brick; walls stripped and plastered; heating not determined; electric lighting; contract recently noted awarded to Nicholasville Lumber Co., Nicholasville.

Tex., Bartlett.—Bartlett Lodge, No. 692, Ancient Free and Accepted Masons, awarded contract to K. J. Flick to erect lodge and store building; 28x100 feet; cost \$3800. (Recently noted.)

BANK AND OFFICE

Ga., Moultrie.—Moultrie Banking Co. awarded contract to erect office building; two stories; frontage 75 feet; lower floor for stores; upper floor for offices.

La., Mamou.—Evangeline Bank & Trust Co., Villa Platte, La., awarded contract to C. D. Stewart, Baton Rouge, La., to erect

Bank building previously noted; 28x46 feet; ordinary construction; fireplaces; cost \$4000; plans by Emile Wiel, New Orleans, La. (See "Machinery Wanted.")

Mo., Webster Groves.—Polar Wave Ice & Fuel Co. awarded contract for office, etc. (See "Miscellaneous Structures.")

Tenn., Knoxville.—Holston National Bank awarded contract at \$361,000 to George A. Fuller Company, Fuller Bldg., New York, to erect bank building; 12 stories; 45x145 feet; steel construction; fireproof; plans by John Keven Peoples, Norfolk, Va. (Previously noted.)

CHURCHES

D. C., Washington.—New Jerusalem Church, 16th and Corcoran Sts. N. W., awarded contract to William P. Lipscomb & Co., 1405 F St. N. W., Washington, to erect addition to edifice to provide Sunday-school rooms and new entrance; cost \$25,000; plans by Paul Z. Pels, 201-202 Corcoran Bldg., Washington, and Warren Smith, Boston, Mass.

Va., Richmond.—St. Thomas' Episcopal Church awarded contract to W. L. Ragland, Richmond, to erect edifice; cost \$20,000. (Mr. Ragland previously noted as lowest bidder.)

CITY AND COUNTY

Ga., Valdosta-Jail.—Lowndes County Commissioners awarded contract at \$27,000 to Pauly Jail Building Co., St. Louis, Mo., for steel and iron work for jail, and at \$16,000 to Itner Bros., Albany, Ga., for construction of building of brick and stone; will award heating, plumbing and wiring contracts separately; total cost, about \$50,000; plans by Louis R. Benz, Pensacola, Fla. (Recently mentioned.)

N. C., Durham—Fire Station.—City will expend \$6000 to erect fire station; 36x63 feet; ordinary construction; plans by Linthicum & Rose; contract recently noted awarded to Herbert L. Smith, Durham.

Okl., Clinton—City Hall.—City awarded contract to M. T. Murray, Altus, Okla., to erect city hall; three stories; reinforced concrete; fireproof; auditorium to seat 1000; cost \$20,000; plans by Smith & Parr, Oklahoma City, Okla. (Recently noted.)

COURTHOUSES

Okl., Muskogee.—Courthouse Building Co., T. H. Martin, president, 217 Court St., awarded contract to Manhattan Construction Co., New York, to erect courthouse building; 82½x111 feet; eight stories; fireproof concrete construction; five upper stories to be used as county courthouse; cost \$150,000. (Recently noted incorporated with \$150,000 capital stock.)

Tenn., Chattanooga.—Hamilton County Court authorized \$500,000 bond issue for courthouse and jail; contract for former awarded to George A. Fuller Company, Fuller Bldg., New York, at \$312,999; plans by R. H. Hunt and Barnwell & Jones, both of Chattanooga, and bids for latter to be opened on February 15. (Recently noted.)

DWELLINGS

Fla., Dundee.—T. J. Rabon awarded contract to Mr. Kennedy, Lakeland, Fla., to erect bungalow; six rooms and bath.

Fla., Dundee.—Glen St. Mary Nurseries Co. awarded contract to erect dwelling; two stories; nine rooms.

Fla., Tampa.—J. J. Goodbread awarded contract to W. P. Bethen, Tampa, to erect store and dwelling. (See "Stores.")

Ga., Atlanta.—Dr. Royal J. Miller awarded contract to P. J. Wesley to erect dwelling; two stories; frame; cost \$4000.

Ga., Atlanta.—Joseph Regenstein awarded contract to C. B. Meyers Construction Co., 716 Empire Bldg., Atlanta, to erect proposed dwelling; two stories; brick veneer; cost \$12,000; plans by E. Dougherty, Candler Bldg., Atlanta.

Ga., Savannah.—Mrs. M. A. Golden has plans by Percy Sugden, Savannah, for residence; two stories; frame; seven rooms; furnace; cost \$6000; contract awarded to W. T. Hussey, Savannah.

Md., Baltimore.—James S. Donahue, 411 E. 22d St., has plans by and awarded contract to John H. Powers, 2102 Poplar Grove St., Baltimore, to erect 21 dwellings on Cokesbury and Kennedy Aves.; two stories; 14x48 feet; Carey roofing; galvanized-iron cornices; cost \$53,000. (Recently noted.)

Md., Foxville, P. O. Lantz.—Irving A. Fox has plans by and awarded contract to I. T. Dunkin to rebuild dwelling and barn; latter, 40x60 feet; dwelling, 26x30 feet; metal roof on dwelling; shingle roof on barn. (Previously noted burned at Smithsburg, Md.)

Mo., University Station, St. Louis.—Ella M. Kohler has plans by and awarded contract to Leigh Bros. Real Estate & Investment Co., 745 Frisco Bldg., St. Louis, to erect three-story brick dwelling; 52x34 feet; cost \$6500.

N. C., Winston-Salem.—J. E. Glimmer awarded contract to J. E. Keperly, Winston-Salem, to erect two one-story dwellings; six rooms each; frame; pebble dash; cost \$3500.

N. C., Winston-Salem.—A. E. Shore awarded contract to T. A. Butner, Winston-Salem, to erect dwelling on the Boulevard; two stories; 11 rooms; frame; metal roof; cost \$3200.

Okl., Oklahoma City.—Mr. Gray awarded contract to Stewart & Wilderson, Oklahoma City, to erect California bungalow on Capitol Hill; cost \$4000.

S. C., Greenville.—J. Eugene Carter awarded contract to Hendrix & Diver, Greenville, S. C., to erect dwelling recently noted; eight rooms; ordinary construction; base burners and grates; electric lighting; cost \$3500; plans by J. T. Lawrence, Greenville. (See "Machinery Wanted.")

Tenn., Nashville.—E. M. Fox awarded contract to C. C. Carter, Nashville, to erect dwelling; cost about \$4000.

Tex., Bay City.—Ed Barrett awarded contract to Brown Bros., Bay City, to erect residence in West Bay City.

Tex., Bay City.—L. V. Williams awarded contract to Brown Bros., Bay City, to erect dwelling in East Bay City.

Tex., Houston.—K. E. Womack awarded contract to A. T. Schmitz & Son, Houston, to erect dwelling; eight rooms; two stories; frame; furnace; cost \$10,000; plans by B. P. Briscoe, Houston. (Recently noted.)

Tex., Houston.—Russell-Brown Company has contract to erect 11 dwellings in Montrose Addition; six to eight rooms; cost \$1500 to \$4000 each.

Tex., Taylor.—Dr. J. E. Bledsoe awarded contract to G. B. Brieger, Taylor, to erect residence; cost \$5000.

Tex., Waco.—Sam Sanger awarded contract to J. M. Bush, Waco, to erect residence; brick and cement; two stories; 10 rooms; cost \$18,000; plans by Roy E. Lane, Waco.

GOVERNMENT AND STATE

Ga., Atlanta—Hospital.—Georgia Soldiers' Home trustees awarded contract at about \$4800 to H. G. McDaniel, Atlanta, to erect annex to hospital building; has \$5000 appropriation.

Mo., Maryville—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., awarded contract at about \$62,000 to W. D. Lovell, Minneapolis, Minn., to erect postoffice building; limestone construction. (Lately mentioned.)

Tex., Abilene—Epileptic Cottage.—Board of trustees State Epileptic Colony awarded contract to R. C. Lewis, Abilene, to erect cottage for women; 36x47 feet; two stories; ordinary construction; heated from central heating plant; cost \$12,000; plans by Wm. P. Preston, Abilene. (Recently noted.)

HOTELS

Mo., Kansas City.—J. H. White awarded contract to A. F. Morris, Kansas City, to remodel Beals Bldg. at 9th and Wyandotte Sts. for hotel; will erect three additional stories; canopies over entrances; cost about \$25,000.

N. C., Wrightsville.—Wrightsville Realty Co. awarded contract to C. B. West, Wilmington, to erect hotel; about 35 rooms; cost \$10,000 to \$12,000. (Recently reported incorporated with \$50,000 capital stock by Thos. H. Wright and others.)

Va., Richmond.—H. S. Wallerstein, 209 S. 3d St., awarded contract to W. A. Chesterman, Richmond, to erect hotel; eight stories; 66x115 feet; fireproof construction; plans by Carneal & Johnson, Richmond. (James J. Pollard and H. S. Wallerstein previously noted to erect hotel.)

W. Va., Parkersburg.—Monroe Hotel Co. awarded contracts to erect five-story addition to hotel on Court Sq.; 30x40 feet; 40 rooms, each equipped with private bath; first floor to connect with present dining-room; cost about \$5000.

MISCELLANEOUS

Fla., West Tampa, Station Tampa—Clubhouse.—Centro Espanol Society awarded contract at \$64,215 to Bates & Hudnall, Tampa, to erect clubhouse; two stories; lower floor for clubrooms and theater; upper floor for ballroom; brick; terra-cotta trimmings; Moorish design; tile roof; clubrooms to have tiled floors; marble stairway leading from clubrooms to ballroom; copper and glass marquee; 95x171 feet; plans by Fred James, Tampa. (Previously noted.)

Fla., Ybor City, Ind. Station.—Tampa Clubhouse.—Centro Espanol Society awarded contract at \$61,000 to C. F. Aulick, Tampa, to erect clubhouse; two stories; lower floor for clubrooms and theater; upper floor for ballroom; red brick throughout; 70x200 feet; recess entrance with overhanging decorated portico; plans by F. J. Kennard, Tampa. (Previously noted.)

Md., Baltimore.—Hospital.—Maryland Homeopathic Hospital will expend \$7000 to remodel building at 1122 N. Mount St. for hospital; semi-fireproof construction; hot-water heat; electric lighting; cost of elevator, \$1400; contract recently noted awarded to Harry Maclellan, Builders' Exchange, Baltimore.

Md., Foxville, P. O. Lantz.—Barn.—Irving A. Fox has plans by and awarded contract to I. T. Dunkin to rebuild barn and dwelling previously reported burned. (See "Dwellings.")

Mo., Fenton—Dancing Pavilion.—Farmers' Club awarded contract to W. R. Tomkins, Kirkwood, Mo., to erect dancing pavilion; 80x100 feet; mill construction; steam heat;

electric lighting; cost \$10,000; plans by Fred Heinz, Webster Groves, Mo. (Mr. Tompkins recently noted to erect building.)

Mo., Webster Groves—Stable, Coal Sheds, etc.—Polar Wave Ice & Fuel Co. awarded contract to Lueke Bopp Construction Co., St. Louis, Mo., to erect office, stable and coal sheds; cost \$7000; plans by Clymer & Drischler, 105 N. 7th St., St. Louis, Mo.

Tenn., Memphis—Stable.—Southern Express Co., 71 Broadway, New York, awarded contract to Olson & Lesh, Memphis, to erect stable on Butler Ave. near 3d St.; brick; composition; concrete floors; 80x100 feet; cost \$15,000.

Va., Salem—Orphanage.—Trustees of Baptist Orphanage of Virginia awarded contract to Roades & Wade, Roanoke, Va., to erect Carpenter building at orphanage; plans by George R. Gagan, Roanoke, Va. (Recently noted.)

RAILWAY STATIONS

Ala., Flomaton.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., awarded contract to E. B. Ratcliff Co., Birmingham, Ala., to erect depot; two stories.

Ga., Vidalia.—Georgia & Florida Railway Co., W. A. Swallow, chief engineer, Augusta, Ga.; Seaboard Air Line Railway, W. L. Seddon, chief engineer, Portsmouth, Va.; Macon, Dublin & Savannah Railroad, J. T. Wright, general manager, Macon, Ga., awarded contract to Georgia Construction Co., Newnan, Ga., to erect union station; cost about \$15,000; plans by G. Lloyd Preacher, Augusta, Ga. (Recently noted.)

Mo., Kansas City.—Kansas City Terminal Co., W. S. Kinnear, president, awarded contract at \$230,000 to Jacques Steel Co., Long Bldg., Kansas City, for ornamental bronze and steel work for union station; one door alone to cost \$9000; cost of entire structure \$6,000,000; plans by Jarvis Hunt, Monadnock Bldg., Chicago, Ill. (Previously detailed.)

SCHOOLS

Ga., Fort Valley.—City awarded contract to George M. Lumsford, Opelika, Ala., to erect high-school building; two stories; brick; plans by G. Lloyd Preacher, Augusta, Ga. (Previously noted.)

Ga., Parrott.—School Board awarded contract to W. T. Jay & Co., Shellman, Ga., to erect proposed school building; cost \$10,000. (Bond issue previously noted.)

N. C., Chapel Hill.—University of North Carolina, Dr. F. P. Venable, president, awarded contract to J. G. Lawrence, Durham, to erect three dormitory buildings; cost \$50,000; contract for heating awarded to B. MacKensie of Greensboro, N. C.; plans by Milburn, Helster & Co., Home Life Bldg., Washington, D. C. (Recently noted.)

Tex., Beaumont.—City school trustees awarded contract at \$19,929 to M. A. McKnight, Beaumont, to erect College St. school; two stories and basement; brick; concrete foundation. (Recently noted.)

Tex., Temple.—City awarded contract at \$7905 to Aug. Balfanz, San Angelo, Tex., to erect school; brick; four rooms. (Previously noted.)

Va., Berkeley, Station Norfolk.—City awarded contract to J. W. Jones, Berkeley, to erect school for colored children; 70x153 feet; two stories and basement; 16 classrooms; hot-air heat; cost \$32,500; plans by Lee & Diehl, Norfolk, Va.; contract for heating not awarded; two open-air rooms, which may be enclosed in glass on two sides. (Previously noted.)

STORES

Ala., Birmingham.—Mason J. Dillard awarded contract to D. C. Powers to rebuild business building recently burned; 50x75 feet; to contain three brick stores; ordinary construction; cost \$5000; plans by D. O. Whildon, Birmingham.

Ala., Wylam.—W. O. Metz will erect one-story brick building; cost \$3400.

Fla., Tampa.—J. J. Goodbread awarded contract to W. P. Bethen, Tampa, to erect store and dwelling; two stories; brick; 35x50 feet.

Fla., Tampa.—Eugene Holtsinger will expend \$20,000 to erect store and apartment building; three stories; three stores on ground floor; ordinary construction; brick; iron front; plans by Bonfoey & Elliott, Tampa; contract recently noted awarded to C. F. Aulick, Box 95, Tampa.

Ga., Moultrie.—Moultrie Banking Co. awarded contract to erect store and office building. (See "Bank and Office.")

Mo., St. Louis.—Simon Lasky will expend \$5000 (not \$15,000, as recently stated) to erect

store building; 27x45 feet; ordinary construction; hand elevator; plans by Nat Abrahams, Culvey Bldg., St. Louis; contract awarded to S. Abrahams & Son, St. Louis.

Mo., St. Louis.—Anheuser-Busch Brewing Association, 512 Benoist Bldg., awarded contract to Louis Grone, St. Louis, to erect store and apartment building; 26x40 feet; frame; cost \$4000; plans by Klipstein & Rathmann, 501 Chemical Bldg., St. Louis.

Mo., Webster Groves.—Gorelock Realty Co., 6919 Plateau Ave., awarded contract to Lueke Bopp Construction Co., St. Louis, Mo., to erect building; brick; cost \$32,400; plans by Klipstein & Rathmann, 501 Chemical Bldg., St. Louis, Mo.

Tex., Dallas.—Edwards & Phillips awarded contract to Lindsey & Smith, Dallas, to erect business building; two stories; brick; cost \$35,000; plans by C. D. Hill & Co., Dallas.

Tex., Bartlett.—Bartlett Lodge No. 692, Ancient Free and Accepted Masons, awarded contract to K. J. Flick to erect store and lodge building. (See "Association and Fraternal Buildings.")

Tex., Bryan.—Mrs. Kate Brantz awarded contract to W. P. Wallace, Bryan, to erect two business buildings; brick; 20x75 feet; one story.

Tex., Houston.—Mrs. Geo. L. Porter awarded contract, it is reported, to G. C. Street, Jr., to erect business building on Fannin St.; two stories; brick; lower floor for stores.

Tex., Port Arthur.—Ross Bros., Beaumont, Tex., will expend \$10,000 to erect business building; 50x100 feet; two stories; mill construction; cost of lighting plant, \$100; plans by F. W. Steinman, Beaumont, Tex.; contract recently noted awarded to W. McDaniel, Port Arthur. (See "Machinery Wanted.")

Tex., Taylor.—Schramm & Braun awarded contract to Evans & Lee, Taylor, to erect business building to be occupied by J. E. Mattek; one story; brick.

W. Va., Parkersburg.—D. H. Welch Company, 3d St., awarded contract to J. W. Curry, Charlotte, for excavating for addition to store, and to Charles Miller, Parkersburg, for brick work; 85x42½ feet; cost \$500; will remove partitions in present structure; install new front at cost of \$1000.

THEATERS

Fla., Ybor City, Ind. Sta. Tampa.—Centro Espanol Society awarded contract for erection of clubhouse and theater building. (See "Miscellaneous Structures.")

Fla., West Tampa—Station Tampa.—Centro Espanol Society awarded contract to erect clubhouse and theater building. (See "Miscellaneous Structures.")

WAREHOUSES

Fla., Jacksonville.—Seaboard Air Line Railway, W. L. Seddon, chief engineer, Portsmouth, Va., awarded contract to Burwell & Hillyer, Jacksonville, to erect warehouses, etc. (See "Railway Shops, Terminals, etc.")

Md., Baltimore.—J. C. Stalport, 514 E. Lombard St., awarded contract to Consolidated Engineering Co., Bromo-Seltzer Tower Bldg., Baltimore, to erect three-story brick building in rear of 514 E. Lombard St.; 25x60 feet.

Herringbone Expanded Metal Lath.

The uses and advantages of metal lath, and especially the type known as Herringbone Ingot iron lath, are fully stated and illustrated in a booklet recently issued by the General Fireproofing Co., Youngstown, O. The rapidly increasing use of metal lath brings up so many questions as to details and methods of construction that this booklet easily serves as a hand-book for architects and contractors. The Herringbone metal lath has been designed to fulfill the demand made upon metal laths in all their various uses for fireproofness, rigidity, lightness, non-corrosiveness and efficiency for holding plaster. The booklet contains specifications for the various kinds of constructions in which metal laths are used. The increasing use of cement construction of houses is covered by the specifications for cement siding. The use of Herringbone lath has given the name "Herringbone Houses" to residences in which this construction is used. A number of illustrations of "Herringbone Houses," together with the method of construction, are included in the booklet. By the use of Herringbone metal lath with cement mortar, many old residences have been rejuvenated and given the appearance of new buildings. This booklet and information as to the nearest agency for this material will be sent on request to the company.

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Tuscaloosa.—John L. Kaul, president of the Kaul Lumber Co., is quoted denying reports that the Louisville & Nashville Railroad Co. is interested with his company in building a railroad to Selma, Ala. He says his road is for lumber company service alone.

Ala., Wetumpka.—Georgia & Alabama Railroad Co., with headquarters at Wetumpka, is incorporated with capital from \$50,000 to \$250,000 to build a line from Tallapoosa, Ga., to connect with the Atlanta, Birmingham & Atlantic Railway at or near Malone, Ala., in Randolph county. It will be about 50 miles long. Stockholders are C. R. Porter, T. J. Simpson, J. C. Porter, G. R. Hutchins and Alex. T. Hamilton.

Ark., Rogers.—George D. Locke, president of the Ozark Land & Lumber Co., writes that it intends to build five miles of railroad to connect with the main line of the Kansas City & Memphis Railway.

D. C., Washington.—The Improvement Association of Suitland, Md., near Washington, is taking steps to secure the construction of an electric railway. Dr. Chas. M. Emmons of Washington and others are interested.

D. C., Washington.—J. Spence Howard, chief engineer, Washington, Spa Spring & Gettysburg Railroad, 11 E. Lexington St., Baltimore, Md., says that the recent press report was in error in stating that line would extend from Berwyn to Charlton Heights, as they are the same place, the name having been changed to the latter. Extension is from Bladensburg to Charlton Heights, Md., 4½ miles. Grade is 80 per cent. complete, and line will probably be in operation by April 1. Thomas Hampton of Washington is the contractor. The mention of Mr. I. H. Saunders of Washington in connection with this enterprise was an error. He is secretary of the Washington, Westminster & Gettysburg Railroad Co.

Fla., Pensacola.—W. P. Dickinson of W. P. Dickinson & Co., 106 S. La Salle St., Chicago, says that franchise is secured at Pensacola for the Memphis & Pensacola Railroad and that terminal improvements there will probably be entered upon to cost about \$5,000,000. Three engineering parties are in the field. A small amount of construction to hold line is being done south of Grenada, Miss.

Fla., Bagdad.—The Bagdad Lumber Co., successor to the Stearns & Culver Lumber Co., 140 S. Dearborn St., Chicago, says that the railroad it is building out of Bagdad, Fla., is only a logging line, and the company is doing the construction itself.

Ga., Cary.—Legal notice is published that the Cary North & South Railway Co. will apply to amend its charter and increase capital from \$100,000 to \$500,000 and for an extension from Danville to Toombsboro, 21 miles; also from Toombsboro to Milledgeville, 24 miles, and Toombsboro to Sandersville, 20 miles. H. R. Brown is president and J. H. King secretary and treasurer. Address, Macon, Ga.

Ga., Elberton.—Reported that construction has begun on the Elberton & Eastern Railway from Elberton to Tignall, Ga., 21 miles. I. L. McCord of New York having the contract. W. O. Jones of Elberton is president.

Ga., Ocella.—The Ocella Southern Railroad, which is building from Fitzgerald toward Rochelle, Ga., has applied for authority to increase stock from \$150,000 to \$500,000 and its bonded debt from \$300,000 to \$1,000,000. J. A. J. Henderson, Ocella, Ga., is president.

Ky., Paris.—The Louisville & Nashville denies that an extension will be built from Winchester, and that second tract will be constructed from Winchester to Paris. This refers to a recent press report.

Ky., Paducah.—The Chicago, Burlington & Quincy Railroad, according to a report quoting C. G. Burnham, vice-president, will build a new bridge over the Ohio River from Metropolis, Ill., near Paducah, as heretofore rumored. C. H. Cartledge is bridge engineer at Chicago, Ill.

Ky., Paintsville.—The Chesapeake & Ohio Railway, says a report, will build a 35-mile extension from Paintsville to the headwaters of Licking River in Breathitt and Magoffin counties, about 35 miles. R. B. Burks, engineer of branch lines, Richmond, Va., may give information.

La., Eunice.—J. B. Berry, chief engineer of the Rock Island, says there is nothing proposed at present concerning an extension from Eunice, La., toward New Orleans.

La., Glenmora.—Charter is reported published for the Glenmora & Western Railway Co., capital \$300,000, to build a line from

Glenmora, in Rapides Parish, to Shreveport, La., and thence to El Paso, Tex., several hundred miles; also east from Glenmora to New Orleans. W. M. Cady is president, Sam Lisso vice-president, A. F. Sharpe secretary, B. E. Smith treasurer, the other directors being P. H. Maynard, Geo. W. McKenzie and James G. McNary.

La., New Iberia.—The Southwestern Traction & Power Co. is reported to have let contract to Harry K. Johnson of the Chattanooga Construction Co. for its projected line from Jeanerette via New Iberia to Spanish Lake, and work will start immediately. Directors of the construction company are Aaron F. Jacobs, president; J. J. Herrman, first vice-president; F. W. Crosby, second vice-president and general manager; Lawrence Blum, secretary-treasurer; Sol. Wexler, Jules Godchaux, Alex. Hyman and A. G. Barrow of New Orleans.

La., New Orleans.—The Public Belt Railroad contemplates the construction of seven yard tracks between Market and Henderson Sts. and behind the shed of the W. A. Kernaghan wharf. W. B. Thompson is president.

Miss., Meridian.—The Mobile & Ohio Railroad has bought 15 acres in the Armour Division of Meridian and will, it is reported, lay switching tracks and install other betterments. B. A. Wood is chief engineer at Mobile, Ala.

Miss., Meridian.—The Meridian & Memphis Railroad Co., of which S. A. Neville of Meridian is president, is reported to have leased the railroad of the Cotton States Lumber Co., extending from Meehan Junction, six miles west of Meridian, north into Kemper county about 40 miles; also the road of the Buckwalter Lumber Co. extending out of Union, Miss., 13 miles, to a point near the other line, the object being to make them part of the proposed route to Memphis. Mr. Neville is also president of the Meridian & Deepwater Railway, which is building east from Meridian toward the Tombigbee River.

Miss., Summit.—The Summit-McComb Motor Railroad will, it is reported, be extended to Magnolia, seven miles. A. J. Hackett may give information.

Mo., Rolla.—An officer of the Missouri, Arkansas & Gulf Railroad is reported saying that E. B. Young & Co. of Rolla, Mo., have been awarded contract to build the proposed line from Rolla south to Bakersfield, Mo., 125 miles, via Lecom, Licking, Oscar, Stutz, Willow Springs and West Plains; maximum grade 1½ per cent.; maximum curvature 6 degrees. J. B. Payne is chief engineer at Rolla, and Gilbert Lay president at St. Clair, Mo.

Mo., Westalton.—The Chicago, Burlington & Quincy Railroad, according to a report quoting C. G. Burnham, vice-president, will build an extension and a new bridge over the Mississippi River to connect with its present line at or near Westalton. C. H. Cartledge is bridge engineer at Chicago, Ill.

N. C., Beaufort.—The Norfolk Southern Railroad Co. is reported to have made survey for an extension from Beaufort to Cape Lookout, about eight miles. F. L. Nicholson is chief engineer at Norfolk, Va.

N. C., Charlotte.—The Propst Contracting Co. has received the contract to grade three tracks for the Seaboard Air Line to the Interstate Chemical Co.'s plant. Work to be done by March 15.

Okl., Alva.—A mass-meeting is reported to have voted \$150,000 to aid construction of the proposed St. Louis, Oklahoma & Pacific Railroad from Alva through the Texas panhandle via Buffalo and Hooker to Des Moines, New Mexico. Headquarters and shops to be at Alva. The Board of Trade may give information.

Okl., Beaver.—The Beaver, Meade & Englewood Railroad Co. is reported chartered with \$25,000 capital to build a line about 70 miles long, connecting the three points named in Oklahoma and Kansas. Incorporators: Fred C. Tracy, John W. Webb, William T. Quinn, Elbert Clift, Robert McFarland, Levi S. Munsell and Frank Laughlin, all of Beaver, Okla.

Okl., Oklahoma City.—The Fort Smith & Western Railway is reported contemplating the construction this year of a line from Prague to Oklahoma City, about 50 miles, and later possibly another line from Oklahoma City to Piedmont, about 18 miles, both Prague and Piedmont being on the main line. W. M. Bushnell is general manager at Fort Smith, Ark.

Okl., Pawnee.—C. L. Berry of Pawnee is reported planning the construction of a railroad about 225 miles long to connect Miami, Nowata, Bartlesville, Pawhuska, Cherokee

and Alva, Okla., besides other intervening points.

S. C., Charleston.—President Mark W. Potter of the Carolina, Clinchfield & Ohio Railway wires the Manufacturers Record: "It is my expectation that construction on Charleston terminals will begin at early date; cost, approximately \$400,000."

S. C., Columbia.—Steps are being taken in the Legislature to charter the Columbia & Camden Railroad Co. to build an electric line to Camden, about 30 miles; capital \$250,000. Incorporators, B. L. Abney, E. M. Thomson, W. Boyd Evans, W. S. Reamer and others.

S. C., Spartanburg.—J. T. Harris, president of the Chamber of Commerce, and others are reported working on plans to build an electric railway from Spartanburg to Glenn Springs, about 10 miles.

Tenn., Chattanooga.—The Southern Railway is reported to have begun construction of its yard improvements east of King St. The Callahan Construction Co. of Knoxville has the contract.

Tenn., Memphis.—The Arkansas & Memphis Railway Bridge & Terminal Co., which will build the proposed bridge and terminals of the Rock Island lines at Memphis, has organized with the following directors: J. T. Harahan of Memphis and Chicago, E. E. Wright, J. A. Riechman, B. L. Mallory and C. H. Raine, all of Memphis. The board elected J. T. Harahan president, George H. Crosby secretary and treasurer, E. E. Wright vice-president, and W. H. Borsje assistant secretary and treasurer. Mr. Crosby resides at Chicago, being vice-president, secretary and treasurer of the Rock Island lines. Capital of the new company is \$1,000,000.

Tenn., Nashville.—J. B. Smith & Co. of Knoxville, Tenn., are reported to have a contract from the Louisville & Nashville Railroad to build concrete and steel work on 19 miles of its new line, the Lewisburg & Northern. Walton Watson is reported to be resident engineer for the railroad at Lewisburg, Tenn.

Tex., Caldwell.—The Houston & Texas Central Railroad is inviting bids until February 5 to construct the second section of the cut-off from Giddings to Stone City, this work being between Caldwell and the East Yegua River, 10 miles. About 275,000 yards of material will have to be moved. E. B. Cushing is chief engineer of construction at Houston, Tex.

Tex., Dallas.—J. V. Watkins, president, says that the Texas Electric Co., 304 Scollard Bldg., Dallas, Tex., was organized as holding company and financial agent for the Trinity Valley Traction Co. and to build an interurban railway from Dallas to Palestine, Tex. Electric plants will be taken over in connection with the interurban. Other officers of the company are R. M. Nunley, vice-president; E. H. Conibear, secretary, and A. Ragland, treasurer.

Tex., Daingerfield.—E. W. Davis, chief engineer in the field for the Port Bolivar Iron Ore Railroad, which proposes to build an extension of about 70 miles from Ore City via Daingerfield and Naples to Clarksville, Tex., is quoted saying that survey will be completed by February 1. L. P. Featherstone, 2411 Strand, Galveston, Tex., is president.

Tex., El Paso.—The Stone & Webster Engineering Corporation of Boston is reported contemplating the construction of the proposed electric railway from El Paso along the El Paso Valley to Socorro, N. M. C. W. Kellogg, general manager of the El Paso Electric Railway Co., is said to have made report on the plan to the Boston office.

Tex., Paducah.—C. E. Ensminger, second vice-president and general manager, says that the Quannah, Acme & Pacific Railway Co. will build an extension of 50 miles from Paducah to Plains, Tex., through rolling country; date to receive bids indefinite. Hr. Ensminger is also chief engineer.

Tex., Paris.—Stockholders of the Paris & Mount Pleasant Railroad are reported to have discussed the contemplated extension from Bogota to Mount Pleasant, and construction is expected. N. H. Ragland is secretary and general manager.

Tex., Quintana.—Reported that S. M. Swenson Sons, 37 Wall St., New York, and others contemplate building railways and terminals near Quintana, Tex., at the mouth of the Brazos River, in connection with sulphur mining. Others said to be interested are Edwin Hawley, James Stillman, F. A. Vanderlip, Saml. McRoberts, F. Hugh Brown, H. K. Wilson & Co., John Hays Hammond, Tilghman Bros. and A. Chester Beatty.

Va., Norfolk.—The Norfolk & Western Railway, says a report, contemplates soon building second track from Gilmerton to Suffolk, Va., 15 miles; also between Petersburg and Concord, about 100 miles. C. S. Churchill, Roanoke, Va., is chief engineer.

Tex., San Antonio.—Henry W. Quinan, said to represent the English capitalists interested in the proposed San Antonio, Rockport & Mexican Railway, is quoted saying that it will extend from the Crowther oil fields through Eagle Pass to Del Rio. This, it is said, will add 200 miles to the plan as originally published. R. R. Russell is president, and A. L. Matlock, vice-president, both at San Antonio.

Va., Big Stone Gap.—The Big Stone Gap & Powells Valley Railway, recently sold at commissioners' sale, is reported again chartered as the Big Stone Gap & Powells Valley Railroad with \$50,000 capital. L. O. Pettit, formerly engineer of the road, is president; J. E. Bunn, vice-president and general manager, and G. T. Bostwick, secretary and treasurer, all at Big Stone Gap, Va.

Va., Richmond.—The Board of Aldermen has approved the proposed transfer of the Seven Pines line of the Virginia Railway & Power Co. to the Richmond, Urbanna & Peninsula Railroad Co., represented by John C. Robertson and others, which proposes to begin construction of its line to the Pamunkey River and other points within nine months.

W. Va., Buckhannon.—Reported that the Baltimore & Ohio Railroad will build a short line, which it has contemplated for some time, up French Creek and then down the river from Hampton. F. L. Stuart, Baltimore, Md., is chief engineer.

W. Va., Harper's Ferry.—It is officially denied that the Baltimore & Ohio contemplates at present building third track from Engles, W. Va., to near Weverton, Md.

W. Va., Mannington.—The Mannington, Wadestown & Blacksville Railway Co. is reported chartered to build an electric railway to connect the three points named; capital \$50,000; incorporators, S. B. Harker and S. Clark Steele of Wana, W. Va.; Samuel Eakin and M. J. Garrison of Wadestown and E. C. Martin of Mannington, W. Va.

STREET RAILWAYS

Ark., Texarkana.—The Texarkana Gas & Electric Co., W. L. Wood, manager, contemplates building an extension of the Rose Hill street-car line to Westmoreland Place. Construction will begin within two weeks.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Air Compressors and Drills.—See "Lime Hydrating Plant Equipment."

Air Compressor.—American Motor Car Co., George F. Rutler, Jr., secretary and manager, Charlotte, N. C., wants air compressor for inflating tires.

Asbestos.—L. H. Krieter, 509 Chamber of Commerce, Chicago, Ill., wants crude asbestos.

Barrel Machinery, etc.—S. M. Hendricks, 1403 Park Rd., Washington, D. C.,

wants prices on barrel and stave machinery.

Baling Presses.—James H. Elliott, 110 N. Bridge St., Bedford City, Va., wants addresses of manufacturers of presses for baling waste paper.

Boiler.—The Jaggars Company, C. O. Jaggars, president, Cullman, Ala., wants 100-horse-power boiler. (See "Cotton-gin Equipment.")

Boilers, etc.—Fern Lippens, 33 Avenue

des Germain, Brussels, Belgium, wants to communicate with builders of steam boilers, kettles, accessories, gauges, meters, counters, attachments for controlling gauges and meters, etc.

Boots and Shoes.—See "Dry Goods."

Boring Bar.—A. J. Baldwin & Co., 102 Main St., Dawson, Ga., wants geared boring bar to bore steam cylinders 10 to 16 inches diameter by 36 inches long. Send cuts and net prices.

Bottles, etc.—P. A. Tofft, Mt. Ida, Ark., wants prices on cartons, bottles within copper shells, etc., for dry or liquid fire-extinguishing compounds.

Brick Machinery.—Sunnybrook Brick Co., Henry F. Lee, president, Miles Mill, P. O. at Johnston, S. C., wants catalogues and prices on plant for daily output of 50,000 to 60,000 bricks.

Bridge Construction.—P. St. James Wilson, State Highway Commissioner, Richmond, Va., receives bids until noon February 3 to construct bridge across Back Creek, in Highland county, Virginia; 163 feet long; roadway 12 feet; certified check for \$250; plans on file at office of clerk of court, Monterey, Va.

Bridges.—Iredell county, W. S. Falls, County Engineer, Statesville, N. C., is in the market for highway bridges and structural steel during 1912.

Bridges.—Board of Commissioners Jefferson county, Florida, open bids February 7 for three steel bridges; E. B. Bailey, chairman of board, Monticello, Fla.

Boots.—Raymond Toutan, Rue Lafayette 203, Paris, France, is interested in prices on boots; view to representation on commission.

Building Materials.—Agricultural and Mechanical College, F. E. Giesek, college architect, College Station, Tex., wants prices on building materials for dining hall, kitchen, etc.; seating capacity 1600.

Building Materials.—W. McDaniel, Port Arthur, Tex., wants prices on metal ceiling, steel girders, cast iron columns, plate glass, transom awning, plastering material.

Building Materials.—Aronson & Browne, Raleigh, N. C., want prices on marble and tile for walls and side walls; also metal ceiling.

Building Materials.—Juhling Brothers, Williamson, W. Va., will need roofing, metal ceiling, plate glass, doors, electric fixtures and skylights.

Building Material.—Dr. J. F. Woodward, Dayton, Tenn., wants prices on building materials for two-story residence.

Building Materials.—Frank Manly, Dalton, Ga., wants prices on plate and prism glass, cast-iron columns, steel beams, metal window frames, sash, Mississippi wire glass, galvanized cornice, window caps, etc.

Building Materials.—Benjamin West Poindexter, American National Bank Bldg., Richmond, Va., wants catalogues of building materials of interest to architects.

Cans.—Reynolds Silex Co., Bristol, Va., Tenn., wants machinery to manufacture combination fiber tin-top and tin-bottom cans; capacity 50,000 4 1/2-inch tubes, 3 inches diameter.

Canal Construction.—On January 31 at courthouse, Selmer, Tenn., contract will be awarded to lowest responsible bidder for construction of drainage canal in Big Muddy bottom, in southern portion of McNairy county, Tennessee; specifications are about as follows: 7 1/2 miles long; average top, 23 feet; 8 feet bottom; 8 feet deep; clearing way to be included; work to begin April 1 to 15; completion within one year; engineer's report, map, profile, etc., on file in county court clerk's office; 10 per cent. deposit with J. S. Houston, secretary, Guys, Tenn., with each bid; usual rights reserved; contractor to make bond or deposit 25 per cent. of bid; further particulars on application; J. S. Houston, secretary, Guys, Tenn., or T. B. Whitehurst, chairman, Selmer, Tenn.

Cannery Equipment.—S. B. Rlerson, Wilson, N. C., wants prices on equipment for cannery with capacity of about 5000 cases per season each of tomatoes, corn, sweet potatoes and peas.

Cartons.—See "Bottles, etc."

Cement Machinery.—Alabama Portland Cement Co., Demopolis, Ala., will soon be in market for new cement machinery.

Coal.—E. Seymour, care A. Windsor Richards, Esq., Army and Navy Mansions, 100, Victoria St., London, S. W., England, wants to correspond with coal companies; has view to representation in South America.

Concrete Mixers.—See "Lime Hydrating Plant Equipment."

Concrete Mixer.—Delatte & Lagrange,

Lake Charles, La., wants concrete mixer with bucket elevator and bucket barrows

Cooking Appliances.—See "Boilers, etc."

Corn Sheller.—Southmont Milling Co., G. T. Pezzer, president, Southmont, N. C., will probably need corn sheller by May 1.

Cement.—City of Atlanta, Ga., will receive bids at 3 o'clock February 5 for about 3000 barrels cement. (See "Sewer Construction and Materials, etc.")

Contractors' Machinery, etc.—Southern Engineering & Contracting Co., 305 American National Bank Bldg., Macon, Ga., wants information and pamphlets on pipe, towers and tanks, concrete bridges, motors and gasoline engines, filters, septic tanks, concrete waterproofing and other machinery and supplies of interest to engineers and contractors.

Cotton-gin Equipment.—The Jaggars Company, C. O. Jaggars, president, Cullman, Ala., is ready for bids on complete equipment (including 100-horse-power boiler and 75-horse-power engine) for cotton gin of 60 bales daily capacity.

Corrugated Iron.—Raymond Toutan, Rue Lafayette 203, Paris, France, is interested in prices on iron sheets corrugated; view to representation on commission.

Cotton Machinery, etc.—W. B. Troy, Jr., Memphis, Tenn., wants to correspond with manufacturers of cotton and woolen machinery.

Cotton Machinery.—See "Machinery."

Croosoting Plant.—Norfolk Woodworking Machinery Co., Chas. A. McLean, general manager, 45 Commercial Pl., Norfolk, Va., wants prices on small second-hand croosoting plant having capacity for poles 45 to 50 feet long.

Crushers.—See "Lime Hydrating Plant Equipment."

Crusher.—Empire Chemical Mining Co., 409 Walton Bldg., Atlanta, Ga., wants catalogues and information on rock-crushing machinery.

Derricks.—R. B. George Company, Lee H. Hulet, manager, Austin, Tex., will install two derricks, 25 tons capacity, at least 60-foot mast and 50-foot boom, with D. C. hoist.

Ditching Machinery.—Southern Engineering & Contracting Co., 305 American National Bank Bldg., Macon, Ga., wants information and prices on sewer and pipe ditching machines.

Ditching Machinery.—Oxford Water Co., Oxford, N. C., wants equipment for ditching for water mains and for filling and tamping ditches.

Dredging.—War Department, U. S. Engineer Office, Montgomery, Ala. Sealed proposals for dredging in Carrabelle harbor, Florida, received at this office until 1 P. M. February 23. Information on application. G. D. Fitch, Lieutenant-Colonel, Engineers.

Dry Goods, etc.—H. W. Rojer, Jr., Box 112, Curacao, West Indies, wants to correspond with American manufacturers of boots and shoes, hosiery, suspenders, prints, domestic and drills; view to representation on commission in vicinity of Curacao, also Venezuela, Santo Domingo, Porto Rico, Panama and Colombia.

Elevator.—Anson King, Bristol, Va., Tenn., wants prices on electric elevator for office building.

Electric Fixtures.—J. Eugene Carter, Greenville, S. C., wants catalogues, etc., on electrical fixtures.

Electric-light Plant.—Mayor and Commissioners, Littleton, N. C., receive bids until 8 P. M. February 15 at office of Mayor for construction of electric-light plant. For information address T. J. Miles, Mayor, or C. E. Fairbanks, consulting engineer, 417 American National Bank Bldg., Richmond, Va.

Electric-light Plant.—See "Waterworks, Electric-light Plant, etc."

Electrical Machinery.—Plymouth Light & Ice Co., Plymouth, N. C., wants 60 to 75-horse-power motor, 133 cycle, single phase.

Electrical Machinery.—See "Saw."

Electrical Machinery.—Tremont Wested Co., Methuen, Mass., wants voltage regulator for 100-kilowatt 220-volt alternator with direct-connected exciter.

Electrical Machinery, etc.—Water Commissioners, W. H. Fetner, chairman, Macon, Ga., will receive bids until noon February 21 for furnishing following machinery: Two 75-horse-power 900 revolutions per minute 550-volt 3-phase 60-cycle induction motors for direct connection, with compensators for starting of same; two 600-horse-power 720 revolutions per minute 600-volt 3-phase 60-cycle induction motors for direct connection,

with controllers for starting same; four 40 K. V. A. 6000-550-volt 3-phase 60-cycle oil-cooled transformers, switchboard; low-service single-stage centrifugal pumps, each to be direct connected to and operated by electric motor; each pump shall have capacity of 4500 gallons per minute; suction lift 15 feet through 260 feet of 24-inch suction pipe; total discharge elevation above pump to be 30 feet, or total elevation of 45 feet; two high-service multi-stage turbine pumps, each to be direct connected to and operated by electric motor; each pump shall have capacity of 4500 gallons per minute and operate under the following conditions: Suction lift 10 feet through 20 feet of 24-inch suction pipe; total discharge elevation above pump 275 feet, or total elevation of 285 feet; 15 fire hydrants, with 6 1/2-inch standpipes, each to have four 2 1/2-inch nozzle and 8-inch gated connections; 145 fire hydrants, with 6-inch standpipes, each to have two 2 1/2-inch nozzles and 6-inch connections; four 24-inch, 10 20-inch, 2 1/4-inch, 15 12-inch, 11 10-inch, 23 8-inch and 124 6-inch iron body, bronze mounted gate valves; certified check 10 per cent. of bid; for further information address Water Commissioners.

Electrical Machinery.—S. D. Brown, Carrollton, Ga., wants prices on second-hand direct-connected set 250-kilowatt 3-phase 60-cycle 2300 volts.

Electrical Machinery.—American Motor Car Co., George F. Rutzler, Jr., secretary and manager, Charlotte, N. C., wants 10-horse-power and 2-horse-power second-hand motors.

Electric Wiring, etc.—Anson King, Bristol, Va., Tenn., wants prices on electric wiring and lighting for theater and office building.

Elevators.—Lummus Cotton Gin Co., Columbus, Ga., wants two freight elevators.

Engines.—Crescent Pump Works, W. T. Pittman, 711 First National Bank Bldg., Fort Worth, Tex., wants prices on steam engines from 2 to 25 horse-power for driving pumps.

Engine.—The Jaggars Company, C. O. Jaggars, president, Cullman, Ala., wants 75-horse-power engine. (See "Cotton-gin Equipment.")

Filtration Plant.—City of Henderson, Ky., will receive bids until March 2 for furnishing plans for municipal filtration plant. W. I. Thompson, Mayor.

Flooring.—See "Waterproofing."

Flour and Cornmeal.—H. W. Rojer, Jr., Box 112, Curacao, West Indies, wants to correspond with American manufacturers of flour and cornmeal; view to representation on commission in Venezuela, Santo Domingo, Porto Rico, Panama, Colombia and vicinity of Curacao.

Farm Implements.—See "Machinery, etc."

Galvanizing Plants.—Box 575, Newnan, Ga., wants to correspond with manufacturers of galvanizing plants.

Gas Franchise.—Bids received by City Council of St. Petersburg, Fla., until 7.30 P. M. February 1 for 30-year gas franchise; certified check for \$1000; usual rights reserved; copies of ordinance furnished on application.

Gas Machines.—J. H. MacLauchlan Engineering Co., 205 W. Lombard St., Baltimore, Md., wants addresses of manufacturers of gasoline gas machines, suitable for house service.

Gasoline Engines.—See "Contractors' Materials, Machinery, etc."

Gasoline Engine.—Jas. R. Ivey, Box 184, Guntersville, Ala., wants six or eight-horse-power gasoline engine.

Glove Machinery.—See "Overall Machinery, etc."

Grading.—R. B. Fentress of Norfolk, Va., has invited bids through J. Speuce Howard, engineer, 11 E. Lexington St., Baltimore, Md., for 13,000 cubic yards of grading on tract of land between Forest Park and Windsor Hills, Baltimore.

Hardware.—L. Jeusette, 71 Qual Coromense, Liege, Belgium, is interested in prices on small articles of hardware; view to representation.

Hardware.—Raymond Toutan, Rue Lafayette 203, Paris, France, is interested in prices on hardware and tools; view to representation on commission.

Heating Plant.—Benevolent and Protective Order of Elks, Suffolk, Va., will want prices on steam-heating plant.

Heating Plant.—Anson King, Bristol, Va., Tenn., wants prices on heating plant for theater and office building.

Heading Machinery.—Raymond Cooper Co., Box 1448, Atlanta, Ga., wants to

correspond with manufacturers of heading machinery for pine staves.

Hobble.—W. T. Crawford, care Crawford, Jenkins & Booth, Shreveport, La., is interested in hobble for fettering prisoners; wants to correspond relative to having same manufactured.

Hoisting Machinery.—See "Derricks."

Hose, Packing and Sundries.—Sealed proposals received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 A. M. February 3, and then opened in public, for furnishing hose, packing, gaskets, tape, rubber gloves, lamp sockets, pot hends, fuses, electric switches, wire, pipe fittings, cocks, grease cups, boat spikes, tacks, grommets, stocks and dies, oilers, buckets, coal baskets, mop handles, tool handles, ladders, tie plugs, gauge glasses, building brick, sheet lead, solder, lye, linseed oil, chrome green, twine and blotting paper. Blanks and general information relating to this circular (677) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New Orleans; and 614 Whitney-Central Bldg., Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo., and Chamber of Commerce, Quincy, Ill. F. C. Boggs, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Household Novelties.—L. Jeusette, 71 Qual Coromense, Liege, Belgium, is interested in prices on household novelties; view to representation.

Ice Machinery.—See "Refrigerating Plant, etc."

Ice Machinery.—C. G. Trumbo, R. 3, Box 44, Timberville, Va., wants prices on second-hand ice machinery of 10 to 30 tons capacity.

Ice Machinery.—T. G. Johnson, Fayette, Ala., wants to correspond with manufacturers of ice machinery.

Ice Plant.—Manistee & Repton Railroad Co., D. J. Saltsman, industrial agent, Manistee, Ala., wants full information and prices on 10 or 15-ton ice plant.

Incubator Appliances, etc.—Louisiana Building Supply Co., C. T. Matkin, manager, Shreveport, La., wants to correspond with manufacturers of lamps, heaters, tanks and thermostatic regulators for manufacturing incubators.

Lamps.—See "Incubator Appliances, etc."

Laundry Equipment.—J. A. Stein, Rockdale, Tex., wants information and prices on laundry equipment.

Lime Hydrating Plant.—Box 606, Sweetwater, Tex., wants to correspond with manufacturers of or dealers in limekilns, hydrators, steam boilers, rock crushers, concrete mixers, air compressors and air drills.

Machine-shop Specialty.—Emerson Engine Co., Victor L. Emerson, president, Alexandria, Va., wants correspondence with machine shop capable of manufacturing specialty at specified cost for cash under contract; moderate weight machine tools required.

Machine Tools.—Jas. R. Ivey, Box 184, Guntersville, Ala., wants turning lathe, etc., for repair shop.

Machine Tools.—See "Machinery, etc."

Machinery.—Raymond Toutan, Rue Lafayette 203, Paris, France, is interested in prices on cotton, meat-packing and mining (especially gold mining) machinery; has view to representation on commission.

Machinery, etc.—E. Seymour Bell, care A. Windsor Richards, Esq., Army and Navy Mansions, 100, Victoria St., London, S. W., England, wants to correspond with manufacturers of machinery, machine tools and implements of all kinds, with view to representation, on commission, in South America.

Manganese Dioxide.—L. H. Krieter, 509 Chamber of Commerce, Chicago, Ill., wants manganese dioxide.

Mining Machinery.—See "Machinery."

Mineral Wool.—Rev. K. W. Cawthon, pastor First Baptist Church, Hendersonville, N. C., wants addresses of dealers in mineral wool.

Mirrors.—J. Eugene Carter, Greenville, S. C., wants catalogues, etc., from manufacturers of fancy mirrors for cabinets, etc.

Modelmakers' Supplies.—J. E. White, 135 Hamburg St., Baltimore, Md., wants catalogues and prices on modelmakers' supplies.

Motorcycle.—W. L. Moss, care Continental Coal Corporation, Walstead, Ky., wants motorcycle; wants to correspond with manufacturers.

Naval Supplies.—Navy Department, Bureau of Supplies and Accounts, Washington,

D. C. receives bids until February 13 for furnishing 50,000 fire-bricks and 50,000 feet of conduit steel, schedule 4292; 800 feet of belting leather, schedule 4293; 11,000 steel bolts and nuts and 11,000 pounds of medium steel rivets, schedule 4299; delivery Navy-yard, Norfolk, Va.; also receives bids until February 13 for furnishing 1500 feet of black wrought pipe, schedule 4299; 27,500 pounds of black steel angles, schedule 4290; delivery Navy-yard, Charleston, S. C.; also receives bids until February 13 for furnishing 1700 pounds of round brass, schedule 4293; delivery Navy-yard, Washington, D. C. For schedules apply navy pay office nearest navy-yard.

Overall Machinery, etc.—F. T. Hildt, Box 881, Muskogee, Okla., wants addresses of manufacturers of machinery to make overalls, gloves, undershirts, shirts, etc.

Packing-plant Equipment.—See "Machinery."

Paper-tube Machinery.—Meritas Mills, 299 Broadway, New York, wants addresses of manufacturers of machines for making paper sticks or tubes used for textiles.

Paving.—City of Helena, Ark., will open bids February 2 to construct 20,000 square yards of brick pavement in district No. 6; S. R. Faulkner, chairman of commission; E. A. Kingsley, engineer in charge.

Paving Material.—Baltimore (Md.) Board of Awards, care Richard Gwynn, City Register, City Hall, will receive bids until 11 A. M. January 31 for furnishing broken stone, granite paving blocks, hard sandstone blocks and vitrified paving blocks for general purposes in City Engineer's Department during 1912; specifications and blank proposal sheets may be had from City Engineer's office on application; H. K. McCay, City Engineer.

Paving.—Sealed proposals received by H. M. Ringo, City Clerk, Mt. Sterling, Ky., until 7 P. M. February 14 for paving with vitrified block on concrete foundation with concrete curb and gutter of about 12,000 square yards of streets; W. A. Samuels, Mayor.

Paving and Guttering.—R. B. Fentress of Norfolk, Va., has invited bids through J. Spence Howard, engineer, 11 E. Lexington St., Baltimore, Md., for constructing 48,489 square feet of cement sidewalks and 13,854 feet of concrete gutter on tract of land between Forest Park and Windsor Hills, Baltimore.

Paving.—See "Sewer Construction and Materials, etc."

Paving.—City Commissioners, Galveston, Tex., will receive bids until noon February 1 for paving with vitrified brick alleys between 20th and 25th Sts., from Aves. A to E, and between 21st and 24th Sts., Aves. E and F; plans and specifications on file with City Engineer, A. T. Dickey; will consist of 1000 square yards vitrified brick pavement on 4-inch concrete base, 11,800 square yards vitrified brick pavement on sand base, 1500 linear feet concrete retaining bulkhead, and taking up and relaying about 70 square yards brick pavement; certified check 5 per cent. of bid; John D. Kelley, City Secretary.

Paving.—John M. C. Carrera, City Clerk, St. Augustine, Fla., will receive bids until 6 P. M. January 25 for grading, paving, curbing, placing necessary storm sewers and catch-basins, and draining Saragossa St. from Cordova to Malaga St.; City Council will open bids at 7.30 P. M. January 31; specifications on file with City Clerk, City Hall.

Pipe, etc.—Southern Engineering & Contracting Co., 305 American National Bank Bldg., Macon, Ga., wants information and catalogues on American Ingot iron pipe, concrete pipe, wood stave pipe and sewer and pipe connections. (See "Contractors' Machinery, etc.")

Pipe.—See "Sewer Construction and Materials, etc."

Pump.—C. Skidmore, Parkersburg, W. Va., wants one (Bowser preferred) new or second-hand pump.

Rails, etc.—McKeel-Richardson Hardware Co., 153 Main St., Washington, N. C., wants 3000 pounds of 16-pound second-hand or new relaying rail, with splice bars and bolts. Give best price and point of shipment first letter.

Rails.—J. A. Williams, Bamberg, S. C., wants from 1000 to 4000 tons 56-pound steel relaying rails on lease from three to five years, with privilege of buying during that time and with agreement to buy at end of period.

Refrigerating Plant, etc.—Storm Equipment & Supply Co., 209 American National Bank Bldg., Richmond, Va., wants catalogues and prices on refrigerating plant, including ice machine and its accessories; would entertain representation proposition.

Road Construction.—Copiah County Supervisors, B. Shelton, clerk, Hazlehurst, Miss., receive bids until February 5 for construction of 35 miles gravel road in district No. 1; plans, specifications and profiles on file with Mr. Shelton at Hazlehurst and with engineer, the George Company, Randolph Bldg., Memphis, Tenn.; bids to be made on proposal forms as contained in specifications and be accompanied by certified check for 3 per cent. of bid.

Road Construction.—John M. Murch, County Auditor, Galveston, Tex., will receive bids until 11 A. M. February 5 for grading, shelling, bulkheading, etc., of Ave. S road down island from 7th to 13th milepost, and thence to beach; plans and specifications on file with County Auditor; certified check \$3000.

Road Construction.—R. B. Fentress of Norfolk, Va., has invited bids through J. Spence Howard, engineer, 11 E. Lexington St., Baltimore, Md., for two miles of macadam road on tract between Forest Park and Windsor Hills, Baltimore.

Road Construction.—Shelby County Commissioners, D. H. Pope, secretary, Memphis, Tenn., receive bids until 10 A. M. February 1 for hauling and spreading gravel on State Line Rd.; gravel to be hauled from switch at Germantown; about 2500 yards of gravel to be hauled from one to four miles; forfeit of \$300 to accompany each bid.

Road Construction.—Highway Commission first and fifth districts of Hinds county, Jackson, Miss., will receive bids until 10 A. M. February 8 for construction of proposed Jackson and Terry sand and clay road; plans, specifications and profile on file with commission; George W. Sarlis, engineer of districts.

Road Construction.—P. St. J. Wilson, State Highway Commissioner, Richmond, Va., and Tazewell County Supervisors, Tazewell, Va., will receive bids until 11 A. M. February 13 for grading, draining and macadamizing about 113 miles of road in Clear Fork, Jeffersonville and Maiden Spring districts; plans and specifications on file with State Highway Commissioner at Richmond and at clerk's office, Tazewell; bids for each separate section to be accompanied by certified check for \$500, but certified check for \$1500 will entitle bidder to bid on three or more sections; D. B. Daniel, chairman County Supervisors.

Road Construction.—Walton County Commissioners, De Funik Springs, Fla., receive bids until February 17 for constructing 60 miles of sand-clay roads in Township 3 north, including necessary culverts; also 35 miles of main line running east and west through entire county and 25 miles of lateral roads running north and south; certified check for \$500, payable to commissioners; usual rights reserved; Charles H. Gordon, clerk.

Roofing.—Richard W. Massey, Massey Business College, Birmingham, Ala., wants metal Spanish roofing tiles.

Roofing.—Alabama Portland Cement Co., Demopolis, Ala., is ready to contract for re-roofing steel buildings.

Roofing.—North Carolina Children's Home Society, W. B. Streeter, superintendent, Greensboro, N. C., wants prices on steel framing and tile roofing.

Safe, etc.—Evangeline Bank & Trust Co., Villa Platte, La., wants prices on safe and door.

Safe.—Montgomery Savings Bank, Montgomery, Ala., wants prices on safe.

Saw.—Southern Supply Co., 271 Water St., Norfolk, Va., wants addresses of manufacturers of electrically-driven hack saws.

Sewers.—See "Water-works, Electric-light Plant, etc."

Sewer Construction.—City Commissioners, Galveston, Tex., will receive bids until noon February 1 for construction of vitrified pipe sewer laterals in alleys between 20th and 22d Sts. and Aves. A and F; specifications on file with City Engineer, A. T. Dickey; will require 3240 linear feet 8-inch vitrified pipe, 746 linear feet 6-inch vitrified pipe, 126 pieces 6x3-inch Y branches, 3240 linear feet 2x10-inch running board and 12 manholes; certified check 5 per cent. of bid; John D. Kelley, City Secretary.

Sewer Construction.—R. B. Fentress of Norfolk, Va., has invited bids through J. Spence Howard, engineer, 11 E. Lexington St., Baltimore, Md., for construction of 8870 linear feet of sewers on tract of land between Forest Park and Windsor Hills, Baltimore.

Sewer Construction and Materials, etc.—City of Atlanta, Ga., will open bids at 3 o'clock February 5 for furnishing about 60 miles 6 to 24-inch vitrified pipe, delivered

f. o. b. cars Atlanta, Ga.; approximately 3000 barrels cement, delivered on the work; castings for manholes and catch-basins, delivered on the work; laying of about 60 miles of sewers during 1912; also for chert, broken stone, sand and cement for street and sidewalk work; for granite and concrete curbing and brick, tile and sheet cement sidewalk work; specifications obtainable on application to R. M. Clayton, chief of construction. (Recently noted.)

Sewer Construction.—Baltimore (Md.) Board of Awards will receive bids at office of City Register, City Hall, until 11 A. M. February 7 for construction of trunk sanitary sewers in Frederick Rd., sanitary contract No. 79; plans and specifications can be obtained on application at office of Sewerage Commission, 904 American Bldg.; charge of \$2 made for each specification and blueprints; certified check \$3000; approximate quantities, 10,500 linear feet vitrified pipe sewer, 8 to 15 inches in diameter, and 6000 linear feet vitrified pipe house connections; Charles England, chairman Sewerage Commission.

Sewing Machines.—See "Overall Machinery, etc."

Shingle Mills.—E. C. Jordan, Olga, Fla., wants prices on shingle mill for Idella, Fla.

Skylights.—See "Building Materials."

Strawboard.—Reynolds Silex Co., Bristol, Va.-Tenn., wants straw cardboard in carload quantities. (See "Paper-box Literature.")

Stoves.—J. Eugene Carter, Greenville, S. C., wants catalogues, etc., from manufacturers of base burners.

Sugar-mill Machinery.—Prison Commission, Ben E. Cabell, chairman, Huntsville, Tex., will receive bids until noon February 14 for supplying crusher, other machinery and repairs for Clemens State Farm sugar mill and Harlem State Farm sugar mill; for specifications and information address Mr. Cabell.

Sugar Plant.—P. A. Tofft, Mt. Ida, Ark., wants estimates on cost of beet-sugar plant complete; to include all necessities except buildings and land.

Tank.—C. Skidmore, Parkersburg, W. Va., wants 1000-gallon capacity gasoline tank.

Thermostatic Regulators.—See "Incubator Appliances, etc."

Textiles.—See "Dry Goods."

Tile.—See "Roofing."

Tobacco.—Raymond Toutan, Rue Lafayette 263, Paris, France, is interested in prices on tobacco; view to representation on commission.

Tools.—See "Hardware."

Traction Engine.—Egypt Improvement Co., John H. Kennedy, secretary-treasurer, Cummock, N. C., wants oil-burner traction engine, about 45 horse-power, for improved farm machinery, such as disc plows, etc.

Vacuum Cleaner.—Storm Equipment &

Supply Co., 209 American National Bank Bldg., Richmond, Va., wants catalogues and prices on vacuum cleaner; would consider representation proposition.

Water Meters, Hand Cars, Rope, etc.—Sealed proposals received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 A. M. February 19, and then opened in public, for furnishing water meters, tie plates, nuts, hand cars, sledge handles, garbage cans, manila rope and fire-clay. Blanks and general information relating to this circular (No. 676) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 North Point St., San Francisco; also from U. S. Engineer offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill.; and Commercial Club, Tacoma, Wash. F. C. Boggs, Major, Corps of Engineers, U. S. A., General Purchasing officer.

Water-works, Electric-light Plant, etc.—Bids received by Mayor and Aldermen, Lexington, Tenn., until February 8 for water-works, electric-light plant and sewerage as follows: 5.3 miles of 4, 6, 8 and 10-inch water mains, with necessary hydrants, valves, steel tower and tank, reservoir, power station, including boilers and auxiliaries, domestic pump and fire pump of 250,000 gallons capacity; 100 K. V. A. and 50 K. V. A. generator, engine type; 2 high-speed automatic engines to operate same; street-lighting system, consisting of 12 arc lamps and 75 to 100 100-candle-power tungsten lamps; pole line construction, including 110,000 feet No. 6 wire, transformers, pole line materials of all kinds; sewerage system will consist of about 2 miles of 8, 10, 12 and 15-inch pipe, 15 manholes, 7 flush tanks and 1 septic tank; bids considered as a whole and from manufacturers direct; certified check for 5 per cent. amount of bid; usual rights reserved; plans and specifications at office of consulting engineer, R. C. Huston, 1634 Exchange Bldg., Memphis, Tenn., and of city recorder after January 29; specifications sent to prospective bidders upon receipt of \$2 by consulting engineer; C. G. Gathings, Mayor.

Waterproofing.—G. Lloyd Preacher, Augusta, Ga., wants information on waterproofing wooden floors.

Water-works Equipment.—See "Electrical Machinery, etc."

Woolen Machinery.—See "Cotton Machinery, etc."

Woodworking Machinery.—See "Barrel Machinery, etc."

Woodworking Machinery.—See "Head-lug Machinery."

INDUSTRIAL NEWS OF INTEREST

Polindexter & Morrison, Architects and Engineers.

A partnership has been formed between Benjamin W. Polindexter and H. Dunlap Morrison, forming the firm of Polindexter & Morrison, American National Bank Bldg., Richmond, as architects and structural engineers. This firm desires catalogues and other literature bearing on architecture and construction work.

Western Representative of the American Locomotive Co.

C. A. Delaney, who for a number of years was superintendent of the Dickson Works of the American Locomotive Co. at Scranton, Pa., and was later a sales representative at that place, has been appointed Western representative of the American Locomotive Co., 30 Church St., New York, with his headquarters in the McCormick Bldg., Chicago.

Dissolution of Partnership.

The partnership heretofore existing under the name of MacGovern, Archer & Co. has been dissolved, and the corporation of MacGovern & Co. formed in its place. The offices of this corporation remain as before at 114 Liberty St., New York, and will carry on the same business in the sales of electrical and steam machinery, car equipments, railway motors and controllers. Expert service regarding machinery and appraisals will continue to be rendered.

Carolina Metal Products Plant.

The Carolina Metal Products Co. of Wilmington expects to begin manufacturing within 60 days. Its 50x200-foot frame building will be covered with sheet-metal such as

the company will manufacture, and its equipment will cost \$35,000. The product will be culverts, eaves trough, siding and other sheet-metal products. This company was organized last year with \$150,000 capital stock, and Theodore G. Empe is its president and general manager.

Hydro-Electric Power for Sale.

J. Q. Barker of Andrews, N. C., advises the Manufacturers Record that the town of Andrews is proposing to develop a hydro-electric plant primarily for establishing a street-lighting system, but that the city will have a large excess amount of power available for sale at low rates to manufacturers who may locate in the town. Mr. Barker desires to get into communication with manufacturers who will be interested.

Auction Sale of Cotton-Oil Plant.

The plant of the Columbia Cotton Oil & Provision Corporation, including 10 acres of real estate, with buildings, machinery, equipment and improvements, will be sold at public auction February 7, 1912. The sale will take place on the premises at Relee Postoffice, near Rosslyn, Alexandria county, Virginia. Terms of sale and other information may be obtained from Leo P. Harlow, trustee, 412 5th St. N. W., Washington, and 119 S. Fairfax St., Alexandria, Va.

The Creamery Package Manufacturing Co.'s Sales Department.

The sales department of the Creamery Package Manufacturing Co., heretofore located in the general offices at Chicago, has been moved to the ice-machine factory at De Kalb, Ill., and the two will hereafter be

conducted as a single organization. This arrangement will, it is believed, be advantageous by bringing the manufacturing department closer to the customers, thereby enabling the company to give them the best possible service.

H. W. Johns-Manville Company's Louisville Office.

In order to obtain increased facilities for its rapidly-increasing business in Louisville, Ky., the H. W. Johns-Manville Co., 100 William St., New York, has moved from its former office in Louisville to spacious quarters in the Paul Jones Bldg. in that city. The office is in charge of J. R. Chowning, who is well known throughout that section, as he traveled in that territory for some time from the Milwaukee office. A complete line of J-M asbestos and magnesia products, electrical supplies, packings, pipe coverings, roofings, etc., will be handled from the new offices.

Dismantling Machinery and Equipment of Old Plants.

The Roanoke Iron Works, Roanoke, Va., has just completed dismantling the plant of the Salem Wagon Works at Salem, Va. The machinery and equipment consists of engines, boilers, hangers, shafting, pulleys, belting, blowers, fans and woodworking machinery of various kinds, amounting in all to 60 tons, which was moved to the Roanoke shops of the company. In addition to being general manufacturers of iron and steel products, the Roanoke Iron Works makes a specialty of dismantling plants, and several operations of this kind have been executed by the company.

A Steam Boiler Gauge Without Glass.

A steam gauge for use on boilers, which is designed to eliminate the use of glass gauges which frequently break and blow out, has been invented and patented by John A. Moore, Winston-Salem, N. C. In this gauge a metal tube is used in which a float actuates a rod which is bent downward in such a way that the pointer at the lower outside end indicates on a scale, which is fitted parallel with the actuating piston cylinder, the exact level of the water inside of the boiler. It is believed by the inventor of this gauge that the troubles due to glass gauges will be entirely eliminated by the use of this metallic gauge.

Auction Sale of Real Estate in Hagerstown.

A lot 82x172 feet opposite the courthouse, and opposite the city hall, near the Hotel Hamilton, and at the intersection of two of the most-traveled streets in Hagerstown, with a residence and two brick office buildings, is offered for sale in our advertising columns by the Hagerstown Trust Co., Hagerstown, Md. The buildings consist of a two-story-and-attic stone and brick dwelling, with all modern improvements; a one-story brick building containing three sets of two-room offices, and a two-story brick building with three sets of offices of two rooms each on the first floor and six office rooms on the second floor. The location of this lot makes it a particularly valuable piece of real estate, and it is being sold in executing the will of the late Edward W. Mealey.

Milburn, Helster & Co.'s Architectural Designs.

Architects Milburn, Helster & Company, Home Life Bldg., Washington, D. C., have been selected to prepare plans and specifications for the new ten-story Interstate Commerce Commission office building adjoining the American National Bank Bldg., Washington. The building will be owned by the Interstate Building Corporation, and it is expected to have the plans and specifications ready for contractors by March 1, 1912. The contract for heating the Powhatan Hotel, Washington, which was designed by Milburn, Helster & Company, has been awarded to the Biggs Heating Co., Washington. The contract for three new dormitory buildings at the University of North Carolina, at Chapel Hill, has been awarded by these architects to I. G. Lawrence, Durham, N. C. The buildings are to be completed by September 1, 1912. The contract for heating these buildings has been awarded to B. MacKenzie, Greensboro, N. C.

Worthington Pumps at the Equitable Fire.

The installation of Worthington fire pumps in the large buildings near the Equitable Bldg., New York, at the time of the recent fire are credited with having been of the greatest assistance to the fire departments in controlling the fire. These pumps are built by Henry Worthington, 115 Broadway,

New York. When the fire occurred there was a gale blowing at more than 50 miles an hour, and when the material in the elevator shaft ignited the flames were carried up by the draft through the unprotected woodwork. With nothing to arrest its progress, the fire soon extended to all of the combustible material in the building. In less than 20 minutes after the fire started the firemen were on the scene, but they had great difficulty in arresting its progress and confining it to that building. All the water that the street mains would yield was turned into five streams and directed on the fire with little effect. The Singer Bldg., the Bank of Commerce, Hanover Bank, Trinity Bldg., American Security and the United States Realty Bldg., all having Worthington fire pumps, supplied water for two or more streams each. The Singer Bldg. fire pumps performed marked service, taking the place of the high-pressure service when the pressure dropped by delivering four-inch streams into the Fire Department's water-tower under a pressure of 300 pounds for over eight hours. "Underwriter" is the name adopted by the factory mutual insurance companies to designate a duplex steam pump built in strict accordance with specifications issued by them and patterned in general design after the original Worthington fire pump. Such a pump is arranged to start automatically in the event of fire, so that water under pressure is instantly available. Motor-driven centrifugal pumps are also sometimes used, and have the same advantage, in that they can be immediately put in commission.

TRADE LITERATURE.

Dixie Sectional Culverts.

In order to cover the conditions in which solid continuous lengths of corrugated culvert pipe are not desired, the Dixie Culvert & Metal Co., Atlanta, Ga., and Little Rock, Ark., manufactures sectional culverts in convenient shape for hauling, handling and shipping. This form of culvert is illustrated and described in the folder issued by the company. Various forms and sections of culvert are shown in this folder, all of which are made from American ingot iron.

The Canton Culvert Co.'s Spanish Folder.

A comprehensive and liberally illustrated folder in the Spanish language has been published for distribution throughout the world by the Canton Culvert Co., Canton, O. The "Acme" (Nestable) corrugated No-Co-Ro metal culverts are shown and fully described. This folder will be mailed to interested persons on request sent to the Export Department of the Canton Culvert Co., Eleventh avenue and 22d street, New York.

The Tennessee Metal Culvert Co.'s Culverts.

The Highway Improvement News for January contains information on American ingot iron culverts as made by the Tennessee Metal Culvert Co., Nashville. It also contains illustrations of these culverts along the scenic highway in the Santa Fe Canyon—a five-foot culvert under a bulkhead 40 feet long and 20 feet high, with a heavy rock fill over the culvert; a 42-inch culvert 40 feet long under a macadam road leading into Topeka, Kans., in which all the culverts used were of this make. Another illustration shows a retaining wall in which a flood gate is placed, the flow of water passing through the corrugated culvert.

"Eclipse" Hydrants and Plumbers' Specialties.

The products manufactured by the John C. Kupferle Foundry Co., St. Louis, including "Total Eclipse" hydrants and street washers, yard hydrants, fire hydrants, wall hydrants and cast-iron plumbers' specialties, are described and illustrated in catalogue No. 23 recently issued by the company. This company was established in 1857, and its manufactures are widely known as the "Eclipse" products. The catalogue contains sectional views showing the operation of the valves, plungers, etc. Tables of sizes, with price-list of each article, are included. Special street washer fittings are shown, hose-mending fittings, sewer-pipe and cesspool fittings, brackets, valve washers, boiler stands, stop and waste valves, etc., are shown and described with dimensions and prices.

Broomell's "Victor" Vacuum Cleaner

The Broomell Victor stationary vacuum cleaner, which is of such simple and durable construction that it can be operated and cared for by the ordinary help in the house, is described and illustrated in a booklet recently issued by the Victor Cleaner Co.,

York, Pa., its manufacturer. It is an electrically operated outfit and is adapted to use with the ordinary electric lighting current. The various tools, fittings and special fixtures are furnished with the machine, and the prices of the outfit, complete, will be furnished on application. They are made in sizes to suit any kind of a building. Machines may be seen in operation in York, Pa.; at the New York office, 1123 Broadway, and at the showroom of the New York Edison Co., 424 Broadway, New York. This booklet and other information will be sent on request.

Facts About Tarpon Springs.

The attractions and opportunities for investment offered in the vicinity of Tarpon Springs, Fla., are set forth in a booklet distributed by the Tampa & Tarpon Springs Land Co., Tampa, Fla., with branch office at Tarpon Springs. Information is given regarding opportunities for investment in land, for raising grapefruit, oranges and early vegetables, and other facts as presented by men who have lived in that section for many years. Illustrations are given showing a residence street in Tarpon Springs, vegetables ready for market in January, grapefruit trees loaded with fruit and vegetables growing between the rows, many water scenes, fishing and game photographs, and a panoramic view of the water front at Tarpon Springs. The home-seekers' excursion rates include Tarpon Springs, so that a visit there can be economically made. For this booklet and other information, address the company at Tampa or Tarpon Springs.

Trump Turbine Water Wheels.

A few of the many types of turbine water wheels manufactured by the Trump Manufacturing Co., Springfield, O., are described and illustrated in the 1912 catalogue issued by that company. Practical experience of over 40 years is the foundation upon which the Trump turbine stands. Since water-power development has become a science dealing with most exacting conditions requiring the highest efficiency and closest regulation, careful study has been given to the design and principle involved in the construction of these turbines. In addition to illustrations of these turbines in actual use for various requirements, detail drawings are shown and dimension tables, tables of capacity, a table showing the discharge of water under various heads, and a weir table showing the amount of water that will pass through a weir board per minute, are given.

Inquiries covering any special requirements not shown in the catalogue will be carefully responded to.

Calendars for 1912.

In addition to the calendars for 1912, the receipt of which has been acknowledged in these columns, the following have been received: A poster calendar from F. E. Myers & Bro., Ashland, O., manufacturers of force and lift pumps, hay tools, hay unloaders, pulleys, door-hangers, etc. This is the particular style of calendar adopted about 20 years ago, which has become so familiar to the 30,000 Myers dealers. A wall calendar from the De Laval Separator Co., 165 Broadway, New York, manufacturers of the De Laval Cream Separators. A wall calendar from Tommasi, Conin & Company, Importers of motors and machinery, Mexico City, Mexico. This calendar presents illustrations of various machinery that it handles, and which are apparently largely imported from Italy. The fact that this calendar has been sent to the Manufacturers Record indicates that the company is open to increase its trade with American firms manufacturing steam turbines, boilers, gasoline engines, etc.

The Carson-Hubbard Grist and Feed Mill.

The result of concerted efforts and study to produce an improved grist and feed mill, convenient in size and adaptable to use on small or large farms, meal mills, etc., is the Carson-Hubbard mill, which the makers state is one of the most convenient and satisfactory vertical grist and feed mills obtainable. The makers of this mill are both experienced mill operators and machinists, and together form the Carson-Hubbard Mill Co., Taylorsville, N. C. The mill is small and compact, occupying with the engine a floor space of about 7x12 feet, and is 5 feet in height. It can be readily moved and is easily taken apart, no particular experience being required, so that it is easily operated, cleaned and cared for. This mill is adapted to any kind of power, its capacity depending on the size of stone and amount of power in driving. The best white and pink North Carolina granite stones are used. The capacities range from 1 to 25 bushels per hour, with power from 1½ horse-power to 15 horse-power, and stones from 10-inch diameter to 30-inch. A catalogue describing and illustrating this mill, together with price list, may be obtained on application to the company.

MOTOR TRUCK AND TRACTOR NEWS

Sauer Motor Trucks for the Farm.

An extensively illustrated folder has been issued for distribution by the International Motor Co., 30 Church St., New York, showing the Sauer motor truck in active use under various adverse conditions. The "Pioneer Freighter," which made the ocean to ocean trip, figures in several of the illustrations. The application of the use of this truck to hauling problems of farmers is treated in a brief but interesting way. This folder will be sent to interested persons on request.

Comparative Cost of Idle Horses and Motor Trucks.

It is a generally understood and appreciated fact that when fully engaged motor trucks are much more economical than horse-drawn vehicles, but the Packard Motor Car Co. of Detroit shows in its feature bulletin No. 139 that horses and wagons standing still cost \$4.89 per day, where a Packard three-ton truck capable of performing the same amount of work only costs \$2.89 a day standing still. The details of the interesting calculations giving these results are published in the bulletin, which may be obtained from the company or by addressing the Mar-Del Mobile Co., agents for the Packard motor cars, Baltimore.

Motor Trucks at the Baltimore Show.

Interest will be added to the 1912 Baltimore Automobile Show by the addition of a large number of motor trucks to the exhibit. A number of desirable exhibits at the New York Show will be brought to this city, and a number of other attractive displays not shown before will be in evidence. The last three days of the show, which extends from February 20 to February 23, will be devoted to motor trucks and commercial wagons. From all indications the show from this point of view will be much more important than previous ones, as there will be about 30 different makes of trucks, from 600-pound light delivery wagons to big 10-ton trucks for heavy hauling. The members of the

show committee have visited New York to look over the exhibits there with a view of using the information in connection with the Baltimore show. It will be held in the Fifth Regiment Armory, as in previous years.

The Thompson-Breese Auto Plow.

After more than five years of development and the expenditure of a considerable sum of money in experimentation and testing, the Thompson-Breese Co., Wapakoneta, Ohio, has produced and is manufacturing an auto plow that may be used profitably and conveniently on farms of any size. It is sold under a guarantee of "money back" unless all claims made for it are satisfactorily fulfilled. The T-B auto plow is claimed to be adapted not only to do all the work that may be required by power on the farm, such as plowing, threshing, sawing wood and hauling trailers, but to be especially efficient as a road grader, and on account of its light weight will not destroy or tear up the road. It can be run along the road when not grading at a speed of five miles per hour. The company has issued a catalogue describing and illustrating the T-B auto plow, which is there referred to as the one-man, one-machine power plowing outfit. This catalogue will be sent to interested persons on request. In the expansion of its business the company has expressed its intention of establishing a plant at some point in the East, where, it is believed, a good field for the sale of the plow exists, and where foreign markets may be easily reached.

The Atlanta Automobile Show.

Evidence is growing daily of the close interest which the whole southeastern section of the United States takes in the automobile show to be held in Atlanta February 19 to 27. Members of the Atlanta Automobile and Accessory Association returning from business trips through their territory report that they find everywhere a lively interest in the show and that a big attendance is certain. Extensive preparations are now under way for the exhibition. On January 2 the contracts were awarded the successful bidders

for the plan of decoration designed along unique lines for the display, for the alterations in the big building's interior to accommodate the show, and for other matters of preparation. The association being unhampered, its expenditures are being made generously, and the best show that can possibly be presented will be offered to the motorist of the South when the doors of the Atlanta show open February 10. The date of the show is timed so that all manufacturers may be able to display the 1912 models, and it follows the Chicago show just soon enough to allow dealers to ship their exhibits direct to Atlanta. The show is to cater to the whole South, and special rates will be secured on the railroads for passengers. President G. W. Hanson of the E. M. F. Atlanta company, assisted by eight committeemen, will have charge of the show.

Motor Truck Service Stations.

As a model for its service rendered to purchasers of motor trucks to aid in keeping their trucks in a high state of efficiency, the service department inaugurated by the General Motors Truck Co., Detroit, is interesting. T. P. Myers, the general service manager for the company, speaking of this work, says: "It is going to be our aim to establish and maintain a reputation for our product that will be the equal of any company in the country. Where technical investigation and study is necessary, we will outline the needs and recommend the equipment for large companies. Special attention will also be given to securing information and data in new lines of business that have yet to employ motor trucks on a very large scale. The 'after sale' service will be equally important, for the equipment purchased is to be kept up to the highest point of efficiency. The service department will also make it a duty to educate drivers and caretakers of our cars in every part of the territory covered. Our Detroit garage will be used as a training ground for mechanics, who will be used later in the various branches and by our dealers needing men who have been properly trained. The best of those that have been under instruction will be appointed foremen of other maintenance stations, but before such a position is tendered them they must display unusual capabilities for the position. Traveling mechanics will be employed, whose duty will be to visit users and advise them and the drivers in regard to the intelligent handling of our trucks."

Sales at the Motor Truck Shows.

The rapid increase in the use of motor trucks is indicated not only by the large attendance at the recent motor truck shows in New York, but also by the actual purchases made by visitors. It was found that business men attended these shows ready to buy trucks for delivery, and the sales were closed in many instances as soon as the trucks were thoroughly examined. C. W. Squires of the General Vehicle Co., Long Island, stated that his company had sold nine large trucks in the first three days at the exhibit at the Madison Square Garden. The leading exhibitors are reported to have listed "prospects" by the hundred, which will keep them busy for months to come, and in many cases the exhibits made will never return to their salesrooms. The Pierce-Arrow worm drive attracted considerable attention among truck users. This company warrants the worm-gear construction for a period of one year after date of shipment under normal use and service. This exhibit was made by the Pierce-Arrow Motor Car Co. of Buffalo. The "Alco" exhibit made by the American Locomotive Co., 1886 Broadway, New York, produced more than 300 prospects listed, and the company received a repeat order for 10 3½-ton trucks from the Long Island Express Co. Harry S. Houpt, the manager of sales of this company, announced the sale during the show of 43 Alcos, 10 of which were for John J. McDonough, Jr., of Savannah, Ga., and 19 for Thomas L. Hume of Washington, D. C. The success of the New York shows, from a selling standpoint as well as attendance, will have a decisive influence upon the prospective automobile shows being planned in Southern cities, as at Atlanta and Baltimore.

FINANCIAL NEWS

Review of the Baltimore Market.

Office MANUFACTURERS RECORD, Baltimore, Md., January 24. The Baltimore stock market displayed considerable activity during the past week, and there was a well-sustained demand for good bonds, with a general advance in prices. United Railways issues, both stock

and bonds, were especially active, as were those of the Consolidated Gas, Electric Light & Power Co., and substantial gains were established, particularly in the shares.

In the trading sales were recorded thus: United Railways common, 19 to 20½, with last sale at 19½; do. income bonds, 62½ to 64½, with last sale at 64½; do. funding 5s, 86½ to 87½, reacting to 87½; do. notes, 5s, 90½ to 100½; United 4s, 86½ to 85½; United Electric Light & Power 4½s, 94 to 95; Consolidated Gas, Electric Light & Power, 102½ to 104; do. preferred, 104½ to 107½, reacting to 106½; do. 4½s, 89 to 90; Consolidated Gas 5s, 100½; do. 4½s, 97½ to 98; Seaboard Company second preferred, 63½ to 63; Seaboard 4s, stamped, 98½ to 88½; do. adjustment 5s, 83½ to 83½; Mt. Vernon-Woodberry Cotton Duck 5s, 77½ to 78½; G. B. S. Brewing 4s, 36.

Bank stocks sold thus: Bank of Baltimore, 164 to 162½; Merchants', 187; First National, 135; Union, 134½.

Mercantile Trust sold at 150 to 153; Baltimore Trust, 167; Fidelity & Deposit, 149½ to 150; Maryland Trust, 93½ to 95; American Bonding, 77; Maryland Casualty, 97; United States Fidelity, 180; Continental Trust, 223 to 225.

Other securities were traded in thus: Baltimore City 3½s, 1980, 90½; Consolidation Coal, 100½ to 104; Fairmont & Clarksburg Traction preferred, 84½; Houston Oil certificates, 8½ to 9½; do. do. preferred, 71 to 70½; Milwaukee refunding 4½s, 94½ to 94½; Macon Railway & Light 5s, 101½; Norfolk & Portsmouth Traction 5s, 88½ to 89½; Pennsylvania Water & Power 5s, 90½ to 94½, reacting to 93½; Atlantic Coast Line convertible debenture 4s, 101½ to 102½, with last sale at 102½; Chicago Railways 5s, 100½; Detroit United 4½s, 79; Florida Southern 4s, 92½; Baltimore, Sparrows Point & Chesapeake 4½s, 96½; Virginia Railway & Power common, 46½ to 46; Baltimore Electric preferred, 41½ to 45½, with last sale at 44½; Maryland Electric 5s, 99 to 99½; New Orleans Great Northern 5s, 77½ to 80½, reacting to 75½, with last sale at 77; Baltimore City 3½s, 1930, 94½; Georgia, Carolina & Northern 5s, 105½; German Fire Insurance, 17; Macon, Dublin & Savannah 5s, 101½ to 101½; Newport News & Old Point 5s, 97½ to 97; Augusta & Aiken preferred, 79; Carolina Central 4s, 93½ to 93½; Georgia & Alabama 5s, 107½; Pennsylvania Water & Power common, 60½ to 65, reacting to 62½; United States Steel common, 66½ to 66½; Western Maryland 4s, 88; Atlantic Coast Line of Connecticut, 260 to 265; Canton Company (Baltimore), 139½ to 140½; Fairmont Coal 5s, 96½ to 97; City & Suburban (Baltimore) 5s, 105½ to 105½; Fairmont & Clarksburg Traction 5s, 100½; Northern Central Railway stock, 128; Virginia Railway & Power preferred, 85½ to 85½; Anacostia & Potomac 5s, 100½; Augusta & Aiken common, 26 to 26½; Maryland, Delaware & Virginia preferred, 10½ to 10; Baltimore City 4s, 1961, 101½; Savannah, Florida & Western 5s, 110; Consolidation Coal refunding 4½s, 92½; Jamison Coal & Coke, George's Creek 5s, 93; Baltimore City 5s, 1916, 103½; Georgia Southern & Florida common, 35; Memphis Street Railway 5s, 98½; New Orleans Mobile & Chicago 1st 5s, 94½ to 95; Baltimore Electric 5s, stamped, 96 to 97; Houston Oil dividend obligations, 85; Pittsburgh-Allegheny Telephone 5s, 78; Maryland 3½s, 1926, 98½; Norfolk Railway & Light 5s, 100; Atlantic Coast Line of South Carolina 4s, 96; Houston Oil Trust certificates, preferred, 54½ to 54.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended January 24, 1912.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast Line.....	100	133½	136
Atlantic Coast of Conn.....	100	263	269
Fair. & Clarks. Trac. Com.....	100	105	105
Fair. & Clarks. Trac. Pfd.....	100	84	86½
Ga. Sou. & Fla.....	100	35	40
Ga. Sou. & Fla. 1st Pfd.....	100	95	95
Ga. Sou. & Fla. 2d Pfd.....	100	75	75
Maryland & Penna.....	100	30	35
Norfolk Ry. & Lt.....	25	26	26
Seaboard Co. 2d Pfd.....	100	62½	63
United Ry. & Elec. Co.....	50	19½	19½
Virginia R. & P.....	100	46½	46½
Virginia R. & P. Pfd.....	100	38½	38½

Bank Stocks.

Bank of Baltimore.....	100	165	165
Citizens.....	10	40	40
Drovers & Mechanics.....	100	210	210
Exchange.....	100	162	162
Farmers & Merchants.....	40	51	52½
First National.....	100	139	135
German.....	100	108	108
Howard.....	10	14	14
Marine.....	30	43½	43½
Mechanics.....	10	29½	30

Merchants'.....	100	185	187
Second National.....	100	200	200
Western.....	20	38	38
Trust, Fidelity and Casualty Stocks.			
American Bonding.....	25	77	77
Baltimore Trust.....	100	167½	167½
Continental Trust.....	100	224	227
Fidelity Trust.....	100	230	230
Maryland Trust.....	100	94	96½
Maryland Casualty.....	25	97	97
Merc. Trust & Deposit.....	50	152	154
Safe Deposit & Trust.....	100	575	575
Union Trust.....	50	68	68
U. S. Fidelity & Guar.....	100	179½	180½

Miscellaneous Stocks.

Ala. Con. Coal & Iron.....	100	40	40
Ala. Con. Coal & Iron Pfd.....	100	70	70
Con. Gas, E. L. & P. Com.....	100	103	103½
Con. Gas, E. L. & P. Pfd.....	100	106	106½
Consolidation Coal.....	100	103½	104
G. B. S. Brewing Co.....	100	1	2½
George's Creek Coal.....	100	¾	2
Baltimore Brick.....	100	2	2

Railroad Bonds.

Atlantic Coast 1st 4s.....	95½	95½
At. Coast Conv. Deben. 4s.....	101½	102½
At. Coast of Conn. 4s, Cfs. 5-20's.....	91	91
At. Coast 4s, Cfs.....	85	85
At. Coast S. C.....	97	97
At. Coast L. & N. C. T. 4s.....	95½	95½
Carolina Central 4s.....	90½	94
Charleston & West. Car. 5s.....	106½	106½
Coal & Coke Railway 5s.....	94½	96
Coal & Iron Railway 5s.....	101½	101½
Col. & Green 1st 6s.....	106	106
Florida Southern 4s.....	92½	92½
Georgia & Alabama 5s.....	107½	107½
Georgia & Florida 5s.....	70	70
Georgia, Fla. & N. C. 1st Con. 5s.....	105	105½
Macon, Dublin & Savannah 5s.....	101½	101½
New Orleans & Gt. Northern 5s.....	77	77
New Orleans, Mob. & C. 5s.....	94½	95
Petersburg Class A 5s.....	106½	106½
Potomac Valley 1st 5s.....	108	108
Sav. Fla. & West. 5s.....	110½	110½
Seaboard 4s, Stamped.....	88½	89
Seaboard Adjustment 5s.....	83	83½
Seaboard & Roanoke 5s.....	105½	105½
Suffolk & Carolina 5s.....	102½	104
Western Maryland 4s.....	87½	88½
Wilmington & Weldon 5s.....	111	111
Wash., Balto. & Annap. 5s.....	83	83½
Washington & Vandemere 4½s.....	96	96

Street Railway Bonds.

Anacostia & Potomac 5s.....	100½	100½
Atlanta Con. St. Ry. 5s.....	105	106
Augusta Railway & Electric 5s.....	102½	102½
Balto., Sp. Pt. & C. 4½s.....	96½	97½
Baltimore Traction (N. B.) 5s.....	111½	111½
Central Bkly. (N. B.) 1st Con. 5s.....	107	107
Charleston City Railway 5s.....	105½	105½
Charleston Con. Electric 5s.....	96½	97
Citizens' R. L. & P. of N. N. 5s.....	80	80
City & Suburban 5s (Balto.).....	105½	105½
City & Suburban 5s (Wash.).....	103½	104½
Columbia R. G. & E. L. 5s.....	85	85
Fairmont & Clarksburg Trac. 5s.....	100½	100½
Knoxville Traction 5s.....	105	105
Lake Roland Elevated 1st 5s.....	105	105
Lexington Railway 1st 5s.....	95	95
Macon Railway & Light 5s.....	101½	102
Maryland Electric Railways 5s.....	99	99½
Memphis Street Railway 5s.....	99½	99½
Metropolitan 5s (Wash.).....	110	110
Newport News & Old Point 5s.....	96½	97½
Norfolk & Portsmouth Trac. 5s.....	89½	89½
Norfolk Railway & Light 5s.....	100	100½
Norfolk Street Railway 5s.....	109½	109½
United Railways 1st 4s.....	85½	86
United Railways Income 4s.....	64½	64½
United Railways Funding 5s.....	87½	87½
United Railways Notes 5s.....	100	100½
Virginia R. & P. 5s.....	95½	96½

Miscellaneous Bonds.

Ala. Con. Coal & Iron 5s.....	81½	81½
Baltimore Electric 5s, Stp.....	97½	97½
Consolidated Gas 5s.....	109	109½
Consolidated Gas 4½s.....	97½	98
Con. Gas, Elec. Lt. & P. 4½s.....	98½	98½
Consolidation Coal Ref. 4½s.....	93½	94
Consolidation Coal Ref. 4½s.....	92½	93½
Fairmont Coal 1st 5s.....	97	97½
G. B. S. Brewing 1st 4s.....	33½	36½
G. B. S. Brewing Income 5s.....	3½	5
Mt. Vernon-Woodby Cot. Duck 5s.....	94	95
United Elec. Lt. & P. 4½s.....	94	95

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending January 22.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	75	75
Aiken Mfg. Co. (S. C.).....	80	80
American Spinning Co. (S. C.).....	100	100
Anderson Cotton Mills (S. C.).....	48	48
Anderson Cot. Mills (S. C.) Pfd.....	100	100
Arcadia Mills (S. C.).....	82	82
Arkwright Cotton Mills (S. C.).....	109	109
Barton Mills (S. C.).....	105	105
Brandon Mills (S. C.).....	90	103
Brogan Mills (S. C.).....	90	90
Chiquola Mfg. Co. (S. C.).....	170	170
Clifton Mfg. Co. (S. C.) Pfd.....	97	97
Clinton Cotton Mills (S. C.).....	130	130
Cortney Mfg. Co. (S. C.).....	100	100
Dallas Mfg. Co. (Ala.).....	99	99
Darlington Mfg. Co. (S. C.).....	80	80
D. E. Converse Co. (S. C.).....	100	100
Dayton Mills (S. C.).....	95	95
Engle & Phenix Mills (Ga.).....	117	117
Easley Cotton Mills (S. C.).....	162	175
Enoree Mfg. Co. (S. C.).....	60	62
Enoree Mfg. Co. (S. C.) Pfd.....	96	100
Gaffney Mfg. Co. (S. C.).....	67	60
Gainesville Cotton Mills (Ga.).....	72	80
Glenwood Cotton Mills (S. C.).....	130	150
Graniteville Mfg. Co. (S. C.).....	145	145
Greenwood Cotton Mills (S. C.).....	67	60
Grendel Mills (S. C.).....	90	100
Hartsville Cotton Mill (S. C.).....	160	160
Henrietta Mills (N. C.).....	100	175
Inman Mills (S. C.).....	105	105
King Mfg. Co. J. P. (Ga.).....	80	85
Lancaster Cotton Mills (S. C.).....	120	120
Lancaster Cot. Mills (S. C.) Pfd.....	97	100
Langley Mfg. Co. (S. C.).....	104	112
Laurens Mills (S. C.).....	120	135
Limestone Mills (S. C.).....	135	190
Lockhart Mills (S. C.).....	65	65
Lockhart Mills (S. C.) Pfd.....	90	100
Loray Cotton Mills (N. C.) Pfd.....	95	95
Marlboro Cotton Mills (S. C.).....	80	80
Mills Mfg. Co. (S. C.).....	102	102
Molokoh Mfg. Co. (S. C.).....	95	95
Monaghan Mills (S. C.).....	100	100

Monarch Cotton Mills (S. C.).....	105	110
Newberry Cotton Mills (S. C.).....	125	130
Ninety-Six Cotton Mill (S. C.).....	130	150
Norris Cotton Mills (S. C.).....	121	130
Olympia Cotton Mills (S. C.).....	90	90
Orr Cotton Mills (S. C.).....	90	93
Pacolet Mfg. Co. (S. C.).....	90	90
Pacolet Mfg. Co. (S. C.) Pfd.....	95	100
Parker Common.....	25	25
Parker Preferred.....	65	65
Peizer Mfg. Co. (S. C.).....	163	163
Piedmont Mfg. Co. (S. C.).....	175	177
Poe Mfg. Co. F. W. (S. C.).....	110	115
Saxon Mills (S. C.).....	130	130
Spartan Mills (S. C.).....	120	130
Trilon Mfg. Co. (Ga.).....	130	130
Tucapau Mills (S. C.).....	300	350
Union-Buffalo (S. C.) 1st Pfd.....	60	60
Union-Buffalo (S. C.) 2d Pfd.....	15	15
Victor Mfg. Co. (S. C.).....	110	115
Warren Mfg. Co. (S. C.).....	90	95
Warren Mfg. Co. (S. C.) Pfd.....	100	105
Washington Mills (Va.).....	28	28
Washington Mills (Va.) Pfd.....	106	110
Whitney Mfg. Co. (S. C.).....	110	110
Wiscasset Mills (N. C.).....	135	135
Woodruff Cotton Mills (S. C.).....	106	110
Woodside Cotton Mills (S. C.).....	100	100
Watts Mills (S. C.).....	70	85
Williamston Mills (S. C.).....	110	125

LOUISIANA DEVELOPMENT.

Banking Trust Co. Organized at New Orleans to Finance Extensive Plans.

The Banking Trust Co. is reported organized at New Orleans with capital of \$1,000,000 and surplus of \$250,000 for the especial purpose of making loans on country real estate, and it is stated that farmers in Louisiana will now be able to obtain money at lower rates of interest and as they require it to finance their crops. The concern will not solicit deposits, but will act in co-operation with the other existing banks.

It is further said that the company will handle first mortgages on farms, plantations, etc., and will lend its aid toward financing them as well as large development enterprises covering extensive tracts of land. Its temporary headquarters are at 840 Common street, New Orleans.

The officers are J. B. Levert, chairman of the board; Ovide La Cour, president; W. Morgan Gurley, vicepresident; Arthur B. La Cour, treasurer. Messrs. Levert and Ovide La Cour are planters as well as financiers, and Mr. Gurley is a lawyer. Other well-known business men are on the board of directors, as published in another column.

Financial Review for 1912.

Mackubin, Goodrich & Co., 110 E. German street, Baltimore, have issued their annual financial review, which covers the year 1911. It contains the high, the low and the last quotations during the past year, as well as the high and low for 1910 on all stocks and bonds dealt in on the Baltimore and New York stock exchanges. The financial statement of Baltimore city is also included, and the taxable basis, the population and other municipal information is given covering a period of years. This includes the present gross and net debt, and the rule of the Supreme Bench of Baltimore for the investment of trust funds.

Rock Island Debentures.

Speyer & Co. of New York are offering at 97½ and interest the unsold balance of the \$20,000,000 of 5 per cent. 20-year debentures of the Chicago, Rock Island & Pacific Railway Co., which were recently bought by the firm. It is stated that the larger part of the issue has already been placed. Subscriptions will also be received by Alex. Brown & Sons and Middendorf, Williams & Co. of Baltimore, A. G. Edwards & Sons and Francis Bro. & Co. of St. Louis, besides by houses in other cities. Subscription books will open at 10 A. M. January 29 and will close at 3 P. M. or earlier on the same day.

Enlarging Its Business.

The United States Trust Co. of Washington, D. C., according to announcement made there, has purchased the business of

the three Washington branches of the International Banking Corporation, and the latter retires from business in that city. The branches have aggregate deposits of about \$1,700,000. The trust company will continue to operate the branches at Center Market and on Connecticut avenue, but will close the branch on F street, near 14th St. E. E. Jordan is president of the trust company.

FINANCIAL CORPORATIONS.

Ala., Anniston.—The City Bank & Trust Co., successor to the City Bank & Realty Co., with capital increased from \$50,000 to \$100,000, has organized with directors thus: President, C. J. Houser; vice-president, James Keith; cashier, O. M. Alexander; L. E. Ogletree, George Cater, Talbot Ford, John Pelham, J. W. Mallory, T. D. Maybank, J. H. Edmondson and McLane Tilton, Jr.

Ala., Columbia.—The Bank of Columbia, capital \$25,000, has applied for a charter. Stockholders, J. E. McNair, C. L. Finch, W. L. Crawford, John C. Alford, Mrs. J. F. McTyler, E. W. Wilkerson, Wiley Alford, M. M. Dunwoody, R. A. McTyler, T. L. Blackwell, A. B. Thompson and E. B. Chambers.

Ala., Gordon.—The Bank of Gordon is reported incorporated capital \$15,000. Incorporators, W. L. Comack, J. J. Farsh, B. L. Dean, D. H. Vaughn, E. F. Tuttle, Sam J. Hall and others.

Ala., Repton.—The Merchants & Farmers' Bank, capital \$15,000, has applied for charter. Stockholders: W. M. Newton, C. P. Deming, H. L. Dees, W. M. Salter, E. C. Carter, A. E. Knight, Lee Gaston, J. C. Long and J. R. Sims.

Ala., Montgomery.—The Montgomery Savings Bank is reported organized with \$40,000 capital. Directors: Charles L. Harold, president; Ralph D. Quisenberry, vice-president; L. W. Martin, secretary and cashier; A. C. Davis and H. F. Martin.

Ala., Montgomery.—Official: The Montgomery Savings Bank of Montgomery incorporated; authorized capital \$40,000; paid in \$25,000. Incorporators, Chas. L. Harold, R. D. Quisenberry, A. C. Davis, L. W. Martin, H. F. Martin, J. T. Letcher and Samuel Kaufman. Business is about to begin.

Ark., Blytheville.—Official: The Mississippi County Building and Loan Association of Blytheville, a new concern, is chartered; authorized capital \$1,000,000. B. F. Gay is president; Marshall Mott, vice-president; B. A. Lynch, secretary; A. M. Butt, treasurer, the directors including A. C. Lange, C. H. Windt, W. J. Pate, J. W. Brown, I. Rosenthal, P. O. Echols and A. M. Butts.

Ark., Calico Rock.—The People's Bank, capital \$10,000, is reported organized with E. E. McNeill, president; R. H. Wyland, vice-president, the other directors being E. O. Arnold, Seth Matthews and S. L. Guthrie. Expected to begin business March 1.

Ark., England.—The Citizens' Bank will, it is reported, begin business about the first of next month.

Ark., Huntington.—The State Bank of Huntington is reported to have filed articles of incorporation; capital \$25,000. Officers, W. L. Seaman, president; C. C. Graves, vice-president, and L. C. Packard, secretary and treasurer.

Ark., Wynne.—The St. Francis Valley Abstract Co. is reported to have filed articles of incorporation; capital \$6000. Incorporators, Wm. M. Block, Chas. E. Robinson, Mack Stacy and H. P. Maddox.

Fla., Jacksonville.—Legal notice is given that application will be made February 16 to charter perpetually the Florida Fire & Casualty Insurance Co., with headquarters at Jacksonville, to conduct industrial life, fire, marine, health, accident, casualty, liability, credit, fidelity, employers' liability, guaranty, title, live stock and workmen's compensation insurance business; capital \$500,000. The directors are: President, H. Gaillard; vice-president, Charles Blum; secretary and treasurer, Bainbridge Richardson; George W. Carr, C. B. Willis and Huelling Davis. Other stockholders are H. R. Finn and L. E. Jacob, all of Jacksonville.

Fla., Jacksonville.—The Florida Fire & Casualty Insurance Co. has been organized in Jacksonville with directors thus: Henry Gaillard, president; Charles Blum, vice-president; Bainbridge Richardson, secretary and treasurer; Huelling Davis, assistant secretary and treasurer; C. B. Willis, manager fire insurance department; George W. Carr, manager casualty department.

Fla., Miami.—Notice is given that applica-

tion will be made to charter the Miami Bank & Trust Co. on January 25; capital \$50,000; directors, Theo. Hofstatter, president; R. M. Price, first vice-president; Walter Waldin, M. M. Smith of Winter Park, and C. D. Leffer. J. T. Wisdom is cashier. H. G. Ralston, J. K. Dorn and A. A. Boggs of Coconut Grove are associated in the application. All except the two whose residence is before given are at Miami.

Fla., Tampa.—Legal notice is given that application will be made February 19 to charter the Central Trust Co. of Tampa; capital \$50,000. J. M. Harvey, president of the Bank of Commerce, whose name heads the list of incorporators, is given as the principal stockholder, the others being Charles E. Ball of the Mutual Realty Co.; S. C. De Garmo, cashier of the Bank of Commerce; G. Ferlita and D. F. Owen, all of Tampa. The officers are J. M. Harvey, president; C. E. Ball, first vice-president; D. F. Owen, secretary, and S. C. De Garmo, treasurer and cashier. The foregoing, with G. Ferlita, are the directors. It is said that it will succeed the Peninsular Trust Co.

Ga., Ashburn.—Reported that local business men are organizing a bank with \$25,000 capital.

Ga., Atlanta.—The Southern Finance Corporation is reported incorporated with \$100,000 capital by E. F. Johnson, J. O. Palmer and D. B. Donaldson.

Ga., Atlanta.—The American Agency Co., capital \$50,000, is reported incorporated by S. L. Rawlings and A. R. Beck to act as insurance and other agents.

Ga., Atlanta.—The Braselton Investment Co. is reported incorporated with \$10,000 capital by Amos W. Braselton, R. Q. Fuller and D. J. Shannon.

Ga., Augusta.—The Citizens' Trust Co. of Augusta has applied for charter; capital \$25,000; incorporators, N. C. Dowling, W. B. Pace, Joel Smith, W. S. Norris and O. B. Stoughton.

Ga., Macon.—The Atlas Finance Corporation, which was granted a charter last spring, has asked authority to make capital stock \$25,000 instead of \$250,000, with privilege to increase it to \$500,000. Company has not yet organized. Incorporators are J. F. Mercer and A. O. Self of Macon and C. M. Hiteh of Atlanta. Address, 25 Commercial National Bank Bldg., Macon, Ga.

Ga., Vidalia.—A financial institution with \$100,000 capital is reported in process of organization, and Baltimoreans are said to be interested. The Mayor may give information.

Ga., Vidalia.—Official: The Vidalia Loan & Trust Co. chartered; capital \$50,000. Col. Pratt A. Williams, attorney-at-law, is the promoter and will be president.

Ky., Frankfort.—The United American Insurance Co., capital \$1,000,000, is reported organized to conduct fire, life and casualty business. Chas. W. Bell is president; Hubert Vreeland, vice-president; E. C. O'Rear, general counsel, the other directors being R. C. Ford of Middlesboro, H. M. Freeman of Carroll county, R. A. Cook of Christian county, W. E. Williams of Abingdon, Va.; L. L. Dorsey of Jefferson county and W. F. Gray of Frankfort, Ky.

La., Crowley.—Official: The Crowley Bank & Trust Co., succeeding the Crowley State Bank, incorporated; capital \$50,000. Directors, P. S. Lovell, president; W. E. Ellis, vice-president; H. M. Bone, cashier; John Green and W. J. Carmouche. Business will begin about February 20.

La., New Orleans.—The Banking Trust Co., with temporary headquarters at 840 Common St., New Orleans, is organized with capitalization of \$1,250,000 to aid in developing country real estate. It will not, it is said, solicit deposits. Directors: J. B. Levert, chairman of the board; Ovide La Cour, president; W. Morgan Gurley, vice-president; Arthur B. La Cour, treasurer; Jules M. Burgulieres, Wm. C. Dufour, F. A. Maddox, John May, John Poltevent and R. N. Sims.

Md., Baltimore.—The Mutual Loan Co., capital \$200,000, is reported incorporated by Clarendon I. T. Gould, Redmond C. Stewart and Aubrey Pearre, Jr.

Md., Baltimore.—The Economy Loan and Savings Association of Baltimore City incorporated; capital \$250,000. Incorporators: Israel Buckner, Henry Nepotovsky and Lena Buckner.

Md., Baltimore.—The Federal Finance & Construction Co., to act as fiscal and general agent for corporations, is reported chartered under Delaware laws. Capital \$100,000. Incorporators, T. Dayson Larrimore of Baltimore, Md.; Emery M. Newton and William L. Harworth of Westminster, Md.

Md., Federalburg.—The First National

Bank of Federalburg is reported being organized; capital \$25,000. Organizers, Robt. Messenger, correspondent, Federalburg, Md.; E. R. P. Grimes, T. S. Holt, Wm. R. Breeding and J. B. Wright.

Miss., Tunica.—Chartered: Planters' Bank of Tunica; capital \$20,000. Incorporators: J. M. Owens, W. H. Powell, R. I. Abbey and others.

Mo., St. Louis.—The Share & Mortgage Co. has filed incorporation articles; capital \$500,000; \$300,000 paid up. Sidney T. Bixby, Alonso C. Church and Archibald G. Douglass are the principal stockholders, the other incorporators being W. K. Bixby, August A. Busch, H. L. Black, Charles A. Lemp, G. H. Walker, W. B. Dean, L. Kotany and J. H. Wear. The Douglass Loan & Investment Co. seems to be affiliated.

N. C., Asheville.—The Central Bank & Trust Co., capital \$50,000 and surplus \$5000, is to begin business March 4. Organization just completed with directors thus: President, Charles W. Brown; vice-president, W. B. McEwen; cashier, Wallace B. Davis; Dr. P. R. Moale, C. N. Brown, J. W. Rutherford, T. S. Rollins, J. R. Oates, J. C. Abrogast, Henry B. Stevens, J. D. Earle, Eugene Carland, Dr. J. A. Sinclair and J. M. English.

N. C., Wilmington.—Official: The Carolina Building and Loan Association chartered. Paid-in weekly stock represents capital. Incorporators, E. T. Taylor, J. Houghton James, J. W. Yates, J. T. King, Geo. O. Gaylord, J. O. Carr, L. W. Moore. Business is to begin February 4, 1912.

Okla., Canadian.—The Canadian Building and Loan Association, capital \$100,000, is chartered; directors, W. L. Belt, Fain G. Gilcock, M. W. Priddy, John W. Roe, Wirt A. Byers, W. P. Lewallen, H. N. Ames, J. D. Fulton and D. L. Roe, all of Canadian.

Okla., Hominy.—The Farmers' State Bank is reported to have begun business; capital \$15,000. J. E. Martin is president and Albert Johnson, cashier.

Okla., Scipio.—The Scipio State Bank, capital \$10,000, is reported organized and applied for charter. W. H. Freeman is president, the other directors being Travis Myers, vice-president; T. B. Thomas, cashier; R. P. Brewer and R. L. Nesmith.

S. C., Chesterfield.—Official: The Chesterfield Building and Loan Association, capital \$50,000, incorporated. L. H. Trotti is president, H. M. Odom, vice-president, and R. E. Hanna, secretary, treasurer and solicitor. Directors: J. A. Welsh, J. T. Hurst, W. D. Craig, L. H. Trotti and H. M. Odom. Business is to begin at once.

S. C., Rock Hill.—The P. C. Blackman Insurance Agency is reported to have been granted a commission; capital \$5000. Petitioners, P. C. Blackman and H. B. Blackman.

Tenn., Buffalo Valley.—The Bank of Buffalo Valley, capital \$10,000, is reported organized with J. P. Nichol, president; W. W. Jared, vice-president, and W. G. Travis, cashier.

Tenn., Chattanooga.—The Bank of Commerce & Savings Co. is reported organized with directors as follows: C. L. Knoedler, president; J. S. Bell, vice-president and chairman of the board and the finance committee; Hugh C. Crumbliss, cashier; R. B. Davenport, W. S. Beck, John C. Vance, H. W. Steiner, W. B. Hughes, D. L. Grayson, W. T. Tyler, E. F. Hixon, S. E. Drake, W. F. Best, S. A. Hunt, Jr., and J. H. Atwater. Will begin business as soon as building is completed.

Tenn., Chattanooga.—The American Trust & Banking Co. has begun business. H. S. Probasco is president.

Tenn., Dickson.—The Dickson State Bank began business January 15. J. T. Holbrook is president. Oury Harris cashier and W. T. Holland assistant cashier.

Tenn., Knoxville.—Official: The Knoxville Title Co. incorporated; capital \$100,000. Wm. R. Page, Richard P. Johnson, Geo. L. Washburns and Norman B. Morrell, all of Knoxville, and Frederick Giddings of Chattanooga, Tenn. Business is to begin soon.

Tenn., Lebanon.—Plans are reported being made to organize a new fire insurance company. Mayor Jesse T. Odum is said to be the principal promoter.

Tenn., Nashville.—The Tennessee Dwelling House Mutual Fire Insurance Co. is reported incorporated with Reau E. Folk, formerly insurance commissioner, as director. The incorporators are H. W. Buttorff, I. L. Pendleton, Joseph Frank, B. W. Montgomery, A. E. Howell, W. H. Raymond, H. J. Grimes, W. J. Morrison, E. B. Rucker and W. E. Metzger.

Tex., Dallas.—The Amazon Fire Insurance Co., with paid-in capital of \$175,000, cash surplus of \$199,000 and other assets amount-

ing to nearly \$150,000, is reported organized with headquarters at Dallas. R. C. Ayres is president, and W. H. Gaston, treasurer.

Tex., Grande Saline.—The First State Bank of Grande Saline is chartered; capital \$40,000; incorporators, G. M. Alsop, J. M. Dean, J. E. Andrews and others. It succeeds the Citizens' National Bank.

Tex., Larue.—Official: The Citizens' State Bank incorporated; capital \$10,000. D. R. Murchinson, president, Athens; B. C. Wallace, acting vice-president, and H. Register, cashier, both of Larue, Tex. Business began January 2.

Tex., Leonard.—A new bank capitalized at \$50,000 is reported being organized, and business is expected to begin about April 1.

Tex., Overton.—The First Guarantee State Bank of Overton, capital \$10,000, is chartered. Directors: R. A. Motley, president; W. J. Cooledge, vice-president; E. B. McDavid, cashier; V. E. Minor, assistant cashier; H. C. Minor, Sr., H. C. Minor, Jr., and E. R. S. Florey.

Tex., Ragland.—The Bank of Ragland is reported being organized with \$25,000 capital by State Senator Walter T. Brown.

Tex., San Antonio.—Official: The Standard Trust Co. incorporated; began business January 17. President, J. M. Bennett, Sr.; vice-presidents, R. J. Kleberg of Kingsville, and E. B. Carruth of Yoakum; treasurer, J. M. Bennett, Jr., and secretary, James Anderson. W. J. Moore is chairman board of directors. Capital \$250,000. Press dispatches say that offices are in the Gunter Bldg., E. Houston and St. Mary's Sts.

Tex., San Antonio.—Reported approved: The Groos National Bank; capital \$250,000. Organizers, Franz C. Groos, San Antonio, Tex.; F. Groos, Chas. Deussen, I. S. Kanamann and C. H. Kearny.

Tex., San Marcos.—The Citizens' State Bank, capital \$25,000, is reported to have begun business with T. B. Wathen, president; J. H. Berkley, vice-president, and Ed A. Christian, cashier.

Va., Martinsville.—The Piedmont Insurance & Realty Co., capital \$4000 to \$15,000, is incorporated with J. D. Sparrow president, T. N. Barbour vice-president and A. S. Gravely secretary, all of Martinsville, Va.

Va., Portsmouth.—The Elizabeth Building and Loan Association, capital \$30,000, is reported organized with directors thus: H. A. V. Parker, president; R. A. Bullock, vice-president; F. Nash Bilslosy, secretary; J. B. Hudgins, treasurer, and Winston Parrish, attorney; H. A. Hutchins, J. Collins Armistead, R. E. J. O'Connor, L. Privett, J. W. Booth, W. S. Langhorne, Jr., R. B. Ferguson and N. G. Gayle.

W. Va., St. Albans.—Official: The Coal River Insurance Agency of St. Albans, a new concern, is incorporated with \$10,000 capital, to begin business immediately. Marvin C. Jennings is president; M. M. Hendrix, secretary; both of St. Albans.

NEW SECURITIES.

Ala., Tuscaloosa.—Official: \$35,000 of 5 per cent. 30-year school-building bonds were sold at par; denomination \$500. Press dispatches say the bonds were purchased by Otto Marx & Company of Birmingham.

Ark., Heber Springs.—Official: Bids will be received at once for \$20,000 of 5 per cent. 30-year school bonds. Address R. G. Chandler, secretary school directors.

Ark., Clarendon.—Farson, Son & Co. of New York have purchased \$5,000 of Monroe county 6 per cent. courthouse bonds.

Ark., Pine Bluff.—The Lesser-Goldman Cotton Co. of St. Louis is reported to have purchased the bonds of Jefferson County Drainage District No. 1 for \$35,000.

Fla., Arcadia.—Reported that the State of Florida has purchased \$30,000 of sewer and street improvement, and Bumpus & Company \$20,000 of water-works 5 per cent. 30-year bonds.

Fla., Fort Pierce.—Only \$80,000 of the \$90,000 issue of 6 per cent. improvement bonds will be sold on February 14 at 8 P. M., up to which time bids will be received by F. M. Tyler, City Clerk. Bonds dated January 1, 1912. Denomination \$5000 each.

Fla., Key West.—Farson, Son & Co. of New York have purchased \$70,000 of 6 per cent. Monroe county courthouse bonds.

Fla., Palmetto.—Farson, Son & Co. of New York have purchased \$20,000 of 6 per cent. water-works, sewer and paving bonds.

Fla., Pensacola.—A representative of Woodin, McNear & Moore of Chicago, who were

[For Additional Financial News, See Pages 78 and 79.]

Established 1888
The Merchants National Bank
 South and Water Sts., BALTIMORE, MD.
 DOUGLAS H. THOMAS, President.
 WM. INGLE, Vice-Pres. and Cashier.
 J. C. WANDS, Asst. Cashier.
 JOHN B. H. DUNN, Asst. Cashier.
 Capital \$1,500,000
 Surplus and Profits - \$900,000
 Deposits, \$12,000,000
 Accounts of Banks, Bankers, Corporations
 and Individuals solicited. We invite corre-
 spondence.

THE FIRST NATIONAL BANK
 OF KEY WEST, FLA.
 United States Depository and Disbursing
 Agent.
 Capital - - - - \$100,000
 Surplus and Undivided Profits - \$40,000
 A general banking business transacted.
 Special attention given to collections.

IF
 your local financial institution cannot supply
 your needs, consult this bank regarding the re-
 quired additional facilities.

FIRST NATIONAL BANK
 RICHMOND, VA.
 JNO. B. PURCELL, President
 JNO. M. MILLER, Jr., Vice-Pres. & Cashier
 Assets over \$11,000,000.00

INVESTMENT
SECURITIES

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The First National Bank
 17 South St., Baltimore, Md.
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 Accounts of Mercantile Firms, Corporations,
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THE BALTIMORE TRUST CO.
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 Solicits Accounts of Banks, Bankers Corporations, and Individuals.
 Interest Allowed on Deposits Subject to Check.
 Special Rates Made on Time Deposits.
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a driving rope that combines all these requisites. IT IS NOT the CHEAP-
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 special lubricating compound. It requires no external dressing and is
 stretched in process of manufacture. You will find any slight difference in
 first cost soon balanced by the cost of dressing required by ropes not lubricated.

Write as for samples and prices.

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 Largest Workers of Fibre in the World
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TRANSMISSION ROPE

awarded the \$180,000 of Escambia county jail bonds, is reported about to close the deal.

Fla., Tallahassee.—Parson, Son & Co., New York City, recently purchased \$30,000 of 5 per cent. 10-50-year municipal bonds.

Ga., Americus.—Election is to be held to vote on \$100,000 Sumter county road bonds.

Ga., Athens.—It is contemplated to hold another election April 3 on \$200,000 of courthouse and jail bonds.

Ga., Bainbridge.—Official: Bids will be received Monday, March 4, for \$100,000 of 5 per cent city improvement bonds. W. O. Fleming is clerk. Bonds are for schools, \$50,000; paving, \$25,000; city hall, \$15,000; water-works extension, \$10,000. J. W. Callahan is Mayor.

Ga., Bogart.—Reported voted: \$5000 of school bonds.

Ga., Columbus.—Official: \$50,000 of bridge bonds are to be voted upon March 16 and are expected to carry. M. M. Moore is Clerk.

Ga., Claxton.—Official: Bids will be received until 10 A. M. February 12 for \$25,000 of 5 per cent. water-works and electric light bonds; denomination \$1000; dated January 1, 1912; \$5000 mature in ten years; \$10,000 in twenty years and \$10,000 in thirty years. Address The Mayor and Council.

Ga., Quitman.—\$40,000 of school and \$12,000 of fire-department bonds have been voted, but the \$23,000 of street and sidewalk bonds were defeated. Bond Commissioners, W. W. Walker, R. C. McIntosh and H. W. Stubbs.

Ga., Parrott.—Official: J. H. Hillsman & Company of Atlanta, Ga., has been awarded at 102½ the \$6000 of 6 per cent. school bonds; denomination \$500; dated January 2, 1912.

Ky., Jackson.—Adams & Holliday, attorneys, will, it is reported, receive bids until 1 P. M. February 7 for \$10,000 of 6 per cent. bonds of graded school district No. 1; denomination \$500; dated July 1, 1911; maturity July 1, 1921; optional after July 1, 1916.

Ky., Louisville.—S. M. Wilhite, City Comptroller, writes that no bond issue is contemplated at present.

Ky., Maysville.—\$3000 of 6 per cent. sidewalk improvement bonds are advertised for sale. J. Wesley Lee is Mayor.

La., Morgan City.—Bids are invited until noon February 17 for \$90,000 of 5 per cent. water-works and sewer bonds. M. E. Norman is chairman of the finance committee.

Md., Frederick.—The City Attorney has been directed to prepare a bill for the issue of \$50,000 of water bonds.

Miss., Hazlehurst.—\$75,000 of bonds are reported authorized by the supervisors of road district No. 1 of this (Copiah) county.

Miss., Vaiden.—The Commissioners of Hays Creek Canal District, Carroll and Montgomery counties, are reported authorized to issue and sell bonds.

Mo., Jefferson City.—Official: \$70,000 of 4½ per cent. 20-year improvement bonds, for which bids were opened January 15, were sold to the Commerce Trust Co. of Kansas City at par, \$500 premium and expenses. Denomination \$500. Date of bonds, March 1, 1912. Denomination \$500 each.

Mo., Jefferson City.—The successful bidders for the \$124,000 of State Capitol bonds, recently sold at par, were: First National Bank of Salem, \$1000; National Bank of Warrensburg, \$20,000; National Bank of Carthage, \$10,000; Bank of Garden City, \$1000; Exchange Bank of Jefferson City, \$25,000; Merchants' Bank of Jefferson City, \$10,000; Central Missouri Trust Co., Jefferson City, \$25,000; Gordon & Church, Jefferson City, \$5000; First National Bank, Jefferson City, \$25,000; State Bank of Bevier, \$2000.

Mo., Jefferson City.—The State Board of Fund Commissioners has accepted bids for \$124,000 of the 3½ per cent. State Capitol bonds and the Mississippi Valley Trust Co. of St. Louis has offered to sell the unsold balance of the issue of \$3,500,000 for a commission of 3.87, and, if they are not sold by it in 15 days, to take the whole amount itself. A legal decision is necessary, it is said, to ascertain whether the commissioners have the right to dispose of bonds under a commission arrangement. The Missouri Supreme Court will act in the matter.

N. C., Gastonia.—Steps are reported being taken to issue bonds as follows: Water-works, \$17,500; sewerage, \$10,000; lights, \$5000; schools, \$2500; streets, \$35,000.

N. C., Nashville.—Reported that bids will be received at any time for the following 30-year bonds of Nash county, interest not to exceed 6 per cent: \$15,000 of Castalia Township; \$20,000 of Drywells Township; \$20,000 of North Whitaker Township and \$10,000 of South Whitaker Township.

N. C., Durham.—The \$50,000 of 5 per cent. school bonds were voted January 16.

N. C., Greensboro.—Official: The \$30,000 of 5 per cent. 30-year school-building bonds, denomination \$1000, were sold to Seasongood & Mayer of Cincinnati at \$31,002. T. J. Murphy is Mayor.

N. C., Hendersonville.—\$24,000 of Main St. paving bonds have been voted.

N. C., Sanford.—J. J. Edwards, Lemon Springs, N. C., is chairman of the County Commissioners of Lee county, which has just voted \$100,000 of road bonds.

N. C., Selma.—The Mayor is reported saying that the \$20,000 of water, light and improvement bonds offered November 14 were withdrawn as being insufficient and an election will take place January 30 on \$25,000 of 6 per cent. 20-year bonds.

N. C., Shelby.—Official: Bids will be received until 2 P. M. February 6 for \$15,000 of 5 per cent. municipal bonds. J. T. Gardner is Mayor.

N. C., Statesville.—\$400,000 of bonds are reported authorized by this (Iredell) county for highway improvements.

Okla., Oklahoma City.—Official: Bids are being received until January 24 at 7.30 P. M. for \$118,000 of 5 per cent. school funding bonds, redeemable in approximately equal instalments at intervals of 5, 10, 15 and 20 years, bonds being dated December 15, 1911. Denomination \$1000 each. Gus A. Elbow is Secretary.

Okla., Oklahoma City.—It is announced that a vote will be taken on a proposed issue of \$100,000 of water-works bonds at the same time with the proposed issue of \$250,000 for State Capitol site and to aid the Oklahoma Northwestern Railway plan. Date of election not definitely decided, but expected to be about February 1.

Okla., Porum.—Kennedy & Fleming, engineers and contractors, Oklahoma City, inform the Manufacturers Record that they were awarded the \$23,000 of water and electric-light bonds.

Okla., Sapulpa.—Ira J. Anderson, City Clerk, writes: "No bond issue for sale at this time."

Okla., Shawnee.—An official letter confirms report that Spitzer & Company purchased, at par and accrued interest, \$46,000 of 5½ per cent. funding bonds. Address City Clerk.

Okla., Shawnee.—Official: Spitzer, Rorick & Company, Toledo, O., bought at par and accrued interest the \$46,000 of city refunding bonds, 5½ per cents., 23-year, denomination \$1000. A. D. Martin is Mayor.

Okla., Wagoner.—W. A. Brooks of Oklahoma City is reported to have purchased \$55,000 of refunding bonds of this (Wagoner) county at 103.

S. C., Fort Mill.—Reported sold: \$4000 of street-paving bonds.

S. C., Spartanburg.—Concerning the contemplated issue of \$100,000 of funding bonds and \$75,000 of sidewalk, street and sewer bonds, Mayor O. L. Johnson says some time will elapse before a vote is taken upon them.

Tenn., Butler.—W. H. Allen of Elizabethton is reported to have purchased \$6000 of 6 per cent. school bonds. J. O. Reese is Mayor.

Tenn., Chattanooga.—Bids are being received until January 29 by Mayor T. C. Thompson for \$4582 of paving bonds for Market St. from 4th to Water Sts. R. T. McKenney is paving clerk.

Tenn., Chattanooga.—Special dispatch to the Manufacturers Record says that \$500,000 been authorized by the Hamilton County Court at Chattanooga. The bonds will be 4½ per cents., 30-year, and in denominations of bonds for new courthouse and jail have as low as \$100. It is understood bids will be received until February 5.

Tenn., Chattanooga.—Reported than an election will be called to vote on \$250,000 of park bonds. J. H. Warner is commissioner of public utilities, grounds and buildings.

Tenn., Chattanooga.—Official: Bids will be received until noon February 10 for \$350,000 of courthouse, \$75,000 of jail and \$65,000 of Lookout Mountain road, Hamilton county, 4½ per cent. 20-30-year bonds; denomination \$1000; dated April 1, 1912. Address Joe V. Williams, County Judge.

Tenn., Nashville.—Breed & Harrison, and Mayer, Walter & Company are reported to have been awarded jointly, at \$3.57, the \$150,000 of 4 per cent. 14 29-year Davidson County State Fair bonds.

Tenn., Springfield.—February 24, it is reported, an election is to be held in Robertson county to vote on \$300,000 of pike bonds.

Tex., Alta Loma.—W. H. Cushing, secretary, School Board, informs the Manufacturers Record that bonds will not be issued until about April 1.

Tex., Angleton.—The Midland Bridge Co., Kansas City, is reported to have been awarded \$100,000 of 4 per cent. 5-40-year Brazoria county bonds; denomination \$1000; dated April 10, 1911.

Tex., Austin.—The Attorney-General has approved the following securities: \$1,600,000 of Tarrant county road and building bonds; \$45,000 of 5 per cent. bonds of Galveston County Drainage district No. 2; \$75,000 of 5 per cent. 20-40 year bonds of Denton County Road district No. 1; \$500 of 5 per cent. 20-year bonds of McCulloch County Common School district No. 42.

Tex., Beaumont.—The City Secretary is quoted saying that \$140,000 of 5 per cent. 20-40-year public improvement bonds were sold to Breed & Harrison of Cincinnati, Ohio, for par and \$1894.50 premium.

Tex., Benjamin.—Knox county has sold to Parson, Son & Co. of New York \$13,500 of 6 per cent. bridge bonds.

Tex., Bonham.—Reported sold: \$100,000 of street-improvement and \$30,000 of water-works 5 per cent. 20-40-year bonds. W. G. Clark is City Treasurer.

Tex., Brownsville.—Drainage District No. 2 of this (Cameron) county is reported to have voted \$105,000 of drainage bonds.

Tex., Brownwood.—Paul V. Harrell, City Attorney, will receive bids at private sale for \$15,000 of 5 per cent. 40-year water-works bonds.

Tex., Bryan.—Reported that this (Brazos) county will vote February 8 on \$300,000 of road and bridge bonds.

Tex., Celina.—Official: John B. Oldham, Dallas, Tex., purchased at par and accrued interest the \$6000 of street and \$8000 of sewer 5½ per cent. 10-40-year bonds voted October 16, 1911. Dated November 1, 1911. Will L. Newsom is Mayor.

Tex., Corpus Christi.—Official: Spitzer, Rorick & Co., Toledo, O., are reported to have purchased at par and accrued interest \$55,000 of 5 per cent. 40-year city-hall and fire-station bonds voted last September; denomination \$1000; dated October 1, 1911.

Tex., El Paso.—An election is called by the El Paso County Commissioners for February 12 to vote on a proposed issue of \$200,000 of bonds for a dike and a highway along the Rio Grande.

Tex., Floydada.—Parson, Son & Co. of New York have purchased \$20,000 of 5 per cent. Floyd county courthouse bonds.

Tex., Hillsboro.—John B. Oldham, Dallas, Tex., is reported to have purchased \$5000 of sewerage, \$10,000 of debt liquidation and \$15,000 of other bonds.

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Accountant and Auditor
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References—Any Bank in Savannah

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OLD DOMINION LAND COMPANY
30 CHURCH ST., NEW YORK

of water-works 4½ per cent. bonds at par and accrued interest, less \$1200 as attorney's and commission fees.

Tex., Honey Grove.—Official: Fannin county, Tex., has purchased \$1000 of the \$5000 of 5 per cent. 40-year street-improvement bonds at \$1000 net. The remaining \$4000 are offered at private sale; denomination \$1000; dated July 1, 1911. S. H. Garner is Mayor.

Tex., Jacksonville.—An official letter says Cherokee county bond issue failed to carry. Ed Spinks is County Clerk.

Tex., Jefferson.—Reported that \$10,000 of 5 per cent. water-works extension bonds have been issued and approved. J. B. Hussey is Mayor.

Tex., Leonard.—Reported voted: \$10,000 of water-works bonds.

Tex., Marfa.—Reported that school district bonds are to be offered in March.

Tex., Meridian.—P. S. Hale, Judge of Bosque county, is reported to be offering at private sale \$40,000 of 5 per cent. 20-40-year road district No. 7 construction and improvement bonds, voted December 9, 1911.

Tex., Mount Vernon.—The \$42,000 of 6 per cent. Franklin county courthouse and jail bonds have been purchased by Farson, Son & Co. of New York.

Tex., Nocona.—The Nocona National Bank, Nocona, is reported to have been awarded \$17,500 of 5 per cent. 20-40-year waterworks bonds. J. L. Davis is City Secretary.

Tex., Palestine.—\$1800 of bonds issued by Blackfoot School District of this (Anderson) county are reported sold to the State Board of Education.

Tex., Pecos.—Reported that no election for \$100,000 of good-roads bonds was held in the eastern part of this (Reeves) county January 19 on account of a technicality, and another election will be called.

Tex., Port Arthur.—Official: Bids will soon be asked by the School Board for school-building bonds.

Tex., Port Lavaca.—Reported that an election is to be held in Precinct No. 4, Calhoun county, to vote on \$100,000 of road bonds.

Tex., Houston.—Official: \$500,000 of 4½ per cent. 20-30-year Houston school-building bonds voted May 23 last have been sold at private sale to the Wm. R. Compton Company of St. Louis at par, accrued interest and a premium of \$500.

Tex., Richmond.—Press dispatches state that the \$20,000 of bonds recently voted by Richmond Independent School district have been declared illegal, and that another election will soon be held.

Tex., Seymour.—The County Commissioners' Court is reported to have ordered the issue of \$100,000 road bonds recently voted by Baylor county.

Tex., Wellington.—Collingsworth county has sold to Farson, Son & Co. of New York \$7000 of 6 per cent. bridge bonds.

Va., Lebanon.—This (Russell) county is reported to have sold \$170,000 of road bonds to John L. Williams & Sons of Richmond, Va.

Va., Norfolk.—It is contemplated to issue \$80,000 more of bonds for improvements in the Sixth Ward.

Va., Tazewell.—Harris, Forbes & Co. of New York are reported to have been awarded \$200,000 of Tazewell county road bonds.

W. Va., Barboursville.—\$11,500 of sewer bonds are reported voted.

W. Va., Milton.—Press dispatches state that an election is to be held to vote on \$10,000 of water-works bonds.

At Claxton, Ga., bids will be received until February 12 for \$25,000 of 5 per cent. water-works and electric-light bonds. Further particulars will be found in the advertising columns.

At Bainbridge, Ga., bids will be received March 4 for \$100,000 of bonds. Further particulars will be found in the advertising columns.

At Shelby, N. C., bids will be received until 2 P. M. February 6 for \$15,000 of 5 per cent. electric-light-plant bonds. Further particulars will be found in the advertising columns.

At Chattanooga, Tenn., bids will be received until noon February 10 for \$350,000 of courthouse, \$75,000 of jail and \$55,000 of Look-out Mountain road, Hamilton county, 20-30-year 4½ per cent. bonds. Further particulars will be found in the advertising columns.

FINANCIAL NOTES.

The Missouri Bankers' Association will hold its annual meeting at Joplin May 21 and 22.

The American Finance & Bonding Co. is

\$20,000,000

The Chicago, Rock Island & Pacific Railway Company

Twenty-Year Five Per Cent. Gold Debentures,

Dated January 15, 1912.

Due January 15, 1932

Interest payable January 15th and July 15th.

Principal and interest payable in New York, in U. S. Gold Coin; or, at the Holder's Option, in Foreign Currencies as stated in the Debenture.

Redeemable, at the option of the Company, at any time at 105 and interest, on sixty days' previous notice.

Coupon Debentures in denomination of \$1000 each, with privilege of registration as to principal, and exchangeable for Debentures registered as to both principal and interest; Coupon and Registered Debentures are interchangeable.

Application will be made to list these Debentures on the New York Stock Exchange. Total authorized issue limited to \$20,000,000.

From a letter of Mr. Roberts Walker, Chairman of the Executive Committee of The Chicago, Rock Island & Pacific Railway Company, we quote as follows:

"The \$20,000,000 Debentures which you have bought from us are the direct obligation of The Chicago, Rock Island & Pacific Railway Company (the old Company), which was formed in the year 1880, from which time it has uninterruptedly paid dividends on its capital stock, and since 1899 at not less than 5 per cent. per annum.

The average annual surplus of The Chicago, Rock Island & Pacific Railway Company for the five fiscal years 1907 to 1911, after providing for all fixed charges, taxes, rentals, etc., amounted to \$5,965,089, equal to nearly six times the interest charges upon the above \$20,000,000 Debentures had same been outstanding.

For the fiscal year ended June 30, 1911, the surplus of The Chicago, Rock Island & Pacific Railway Company, after providing for all fixed charges, taxes, rentals, etc., amounted to \$5,442,714, equal to nearly five and one-half times the interest charges on the above \$20,000,000 Debentures had same been outstanding.

The sale of the above \$20,000,000 Debentures will, it is expected, provide the Company with funds for the next two years for the purchase of additional terminals, and for second track, sidings and general betterment of the lines of the System. Therefore the Railway Company will not create or sell any additional Debentures prior to January 15, 1914, nor will it sell any First and Refunding Mortgage Four Per Cent. Bonds or other Direct or Guaranteed Bonds during this period, but all such Bonds as may become available will be retained as Treasury Assets of the Railway Company.

One of the terms of the Trust Indenture to the Bankers Trust Co., New York, as Trustee, securing the above Debentures, is that the Railway Company, as long as any of the Debentures are outstanding and unpaid, agrees not to make any new mortgage upon its railroad without also thereby including therein every Debenture issued thereunder equally and ratably with every bond issued under and secured by any such mortgage, such covenant, however, not to prevent the renewal, extension or refunding of any existing mortgage."

HAVING PLACED PRIVATELY THE LARGER PART OF THE ABOVE ISSUE, WE OFFER THE UNSOLD BALANCE AT 97½% AND ACCRUED INTEREST TO DELIVERY, YIELDING 5.20% PER ANNUM.

The subscription books will open at 10 A. M. on Monday, January 29, and close at 3 P. M., or earlier, on the same day.

Temporary receipts will be issued pending the delivery of the Definitive Debentures. The right is reserved to reject any application and to allot a smaller amount than applied for. Payment in full is to be made on February 1, 1912.

New York, January 24, 1912.

SPEYER & CO.

The undersigned are authorized by Speyer & Co. to receive Subscriptions on the terms of the above Prospectus.

**ALEXANDER BROWN & SONS,
MIDDENDORF, WILLIAMS & CO., Baltimore.**

reported to have increased its capital from \$25,000 to \$100,000.

The Commercial National Insurance Co., according to press dispatches, has increased its capital to \$100,000.

The Bank of Crawford, at Crawford, Ga., is reported, to increase its capital from \$25,000 to \$45,000.

The Merchants' Bank of Augusta, Ga., according to press dispatches, has increased its capital from \$140,000 to \$200,000.

The Sullivan Bank & Trust Co. of Montgomery, Ala., is reported to have increased its capital from \$100,000 to \$250,000.

The conversion of the Farmers' Bank of Leslie, Ark., into the First National Bank is reported approved; capital \$50,000.

The Union Bank & Trust Co. of Monroe,

La., is reported to have been converted into the Union National Bank; capital \$200,000.

The Holston National Bank of Knoxville, Tenn., is reported to have authorized an increase in capital from \$400,000 to \$500,000.

The Gulf Live Stock Insurance Co., with home office at Orange, Tex., will, it is stated, increase its capital from \$10,000 to \$100,000.

The National Life & Accident Insurance Co. of Nashville, Tenn., proposes, it is stated, to increase its capital from \$150,000 to \$200,000.

The Central Life Insurance Co. of Louisville, Ky., according to press dispatches, has decided to increase its capital from \$100,000 to \$500,000.

The Security Bank & Trust Co. of Chattanooga, Tenn., according to press dispatches,

has decided to increase its capital from \$40,000 to \$50,000.

The National Industrial Fire Insurance Co. of Louisville, Ky., will, it is stated, increase its capital from \$50,000 to \$1,000,000 and surplus from \$50,000 to \$1,000,000.

The First National Bank of Anniston, Ala., according to press dispatches, has decided to change its name to the Anniston Banking & Realty Co. and increase its capital to \$100,000.

A condensed statement of 634 State banks in Georgia for 1911 shows total resources, \$126,675,373; loans and discounts, \$90,065,587; due from banks, \$15,735,604; cash and cash items, \$7,736,501; capital stock, \$24,740,581; surplus and net profits, \$13,316,554; due to banks, \$4,740,966; due depositors, \$75,212,248.

Classified Opportunities

MEN WANTED

FOREMAN for steam tale mill in North Carolina; hustling single man preferred; state experience and salary. Address No. 936, care Manufacturers Record.

AGENTS WANTED for Kotten Suction Cleaner, the only practical machine requiring no electricity; splendid opportunity; exclusive territory; liberal discount to right party. H. G. Kotten Co., 30 Church street, New York City.

WE WANT to employ someone to grade and build roads in our township that has the tools and stock to do the work. We have about fifty miles of road to build. We want to commence work March 1. A. E. Smith, Chairman Highway Commission, Mt. Airy Township, Mt. Airy, N. C.

HIGH-GRADE SALESMEN having acquaintance among large manufacturers will bear of side line paying exporters desire one or no samples required. Address "Allen," Box 663, Cincinnati, Ohio.

WANTED—Traveling or local men; all sections of the country; profitable side line; commission or salary; good men average \$100 weekly. For particulars address The Sun Chemical Company, Richmond, Va.

SALESMEN WANTED—Traveling; salary and expenses or commission; must be active, ambitious and energetic; splendid opportunity; former experience not essential. Landmark Cigar Co., Denver, Pa.

AGENCIES WANTED

AGENCIES WANTED FOR EXPORT—Manufacturers' agents in New York doing business with leading exporters desire one or two good agencies from manufacturers who wish to increase their foreign business. Address No. 914, care Manufacturers Record.

AGENCY WANTED for New York city and vicinity. Exclusive connection sought by man 45 years of age, possessing personality and force of character; a good judge of men; one having broad and successful selling and manufacturing experience, technical knowledge and wide acquaintance among right sort of people; no cheap proposition considered; correspondence solicited from manufacturers desiring to secure suitable representation in this market under exceptionally favorable conditions. Address No. 935, care Manufacturers Record.

SITUATIONS WANTED

SALES MANAGER with 10 years' experience in electrical and mechanical equipment along mail-order lines wishes connection with progressive manufacturer; familiar with the details of catalogue work and advertising and an expert sales correspondent. Address 316 Marion St., Elkhart, Ind.

A TECHNICAL GRADUATE with 6 years' experience in the design, installation and operation of steam boilers, high-speed and Corliss engines and sawmill machinery, wishes a position as mechanical engineer or assistant manager with a manufacturing concern; now employed; first-class references furnished. Address No. 933, care Manufacturers Record.

SITUATION WANTED by Cornell graduate having nine years' experience in manufacturing and jobbing business; want position with established company where there is chance of advancement if ability is shown; am willing to start at moderate salary. Address No. 924, care Manufacturers Record.

WANTED—Office, financial or managerial permanent connection with a good live concern, where the most stringent system of things necessary to success and to produce results in sales or production, including office, daily balances, audits and comparisons is needed; have a thorough knowledge of usages in business, banking, insurance, railroading and commercial law and the latest office systems. I can save my salary in economies. Address No. 931, care Manufacturers Record.

EDUCATIONAL

RENSSELAER POLYTECHNIC INSTITUTE, TROY, N. Y.—Courses in Civil, Mechanical and Electrical Engineering, and General Science, leading to the degrees of Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), and Bachelor of Science (B.S.). Special courses in engineering and science. Splendidly equipped new engineering laboratories. Send for catalogues to Registrar.

BANKS

THE PALMETTO NATIONAL BANK, Columbia, S. C.—Capital \$250,000, solicits accounts of banks, firms, corporations and individuals, either commercial or savings accounts.

BUSINESS OPPORTUNITIES

COMPANY FORMING to market 23,000 acres, well adapted to citrus fruits and truck growing; good transportation; many beautiful lakes; want five associates to assist in floating. Box 867, Sanford, Florida.

WE PROMOTE SUBDIVISION SALES—If you own property in or close to a thriving city, cut it up in town lots and let us sell them by our red tag plan. They sell like hot cakes. Tom Magruder, Mgr., Moberly, Mo.

Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 24 lines. Allow seven words per line. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year, as follows: 100 lines, 18c. per line; 300 lines 16c. per line; 500 lines or more, 15c. per line.

TO CORPORATIONS OPERATING IN TEXAS Under Permit.—You need an agent at Austin. I will attend to all your business with departments of the Texas State Government during this year for \$10. Address W. R. Davis, Resident Agent, Box 317, Austin, Texas. Reference, Austin National Bank.

THREE INDUSTRIAL OPPORTUNITIES. \$200,000 telephone system and exchanges, Central Texas; pays 10 per cent. net income. A \$75,000 iron foundry and machine shop, North Texas city. A \$10,000 brick plant, trunk railway, North Texas. All above or either for trade for income property or land. H. H. Hyde, Central Bldg., San Antonio, Texas.

TO A PRACTICAL HANDLE MAN, who is well recommended, we will sell on such easy terms that he can pay for it from the earnings of the plant, an up-to-date plant for making hickory tool handles, singletrees, neckyokes, broom handles; well equipped with an abundant supply of available timber. Address No. 899, care Manufacturers Record.

WE PROMOTE TOWN LOT SALES—Land owners adjoining thriving cities, cut your acreage up into town lots, employ us to conduct a red-tag sale. We'll take the lots to the mint and coin them into money for you. Owners, write for particulars. F. J. Raymond Realty Co., Evansville, Ind.

BUSINESS OPPORTUNITIES—We are headquarters for timbered and cut-over lands, sawmill locations, etc. Attractive offerings in industrial, manufacturing and general business propositions. Gilt-edged securities in several growing Florida corporations. Make a specialty of promoting meritorious enterprises; no others considered. Our business is conducted on a high plane, and it is our unalterable policy to handle only such propositions that we can thoroughly endorse and place on their merits. Numerous references gladly submitted as to our ability and reliability. Marcus E. Sperry, 217 American National Bank Building, P. O. Box 596, Tampa, Florida.

TOURIST HOTEL WANTED

TOURIST HOTEL WANTED AT SAVANNAH, GEORGIA. We have the ideal location; 10 acres on electric car line, near yacht club; has beautiful trees, artesian water and salt-water riparian rights. Bernard & Waters, Box 92, Savannah, Ga.

WINTER HOMES FOR SALE

FLORIDA winter home and celery farm, 10 acres, subterranean, facing St. Johns River; finest fishing and shooting; beautiful bungalow, surrounded by orange trees. Address Cecil Gabbett, Sanford, Florida.

MAPS AND BLUE PRINTS

MAPS OF TEXAS COUNTIES—We make blueprint maps of nearly all Texas counties and several Louisiana parishes. Write for prices on these desired. Singleton Bryan & Co., Beaumont, Texas.

TYPEWRITERS

IF YOU are interested in purchasing a high-grade typewriter and do not care to invest \$100 asked by the manufacturers, we would like you to investigate our remanufactured machines. Three days' trial allowed. Enterprise Exchange, Inc., 609 E. Baltimore street, Baltimore, Md.

ICE MACHINES

WANTED—To correspond with parties desiring or contemplating installing absorption ice machines manufactured by Columbus Iron Works. Consolidated Ice & Power Co., Valdosta, Ga.

LOCATION WANTED

MASSACHUSETTS CORPORATION manufacturing well-established high-class line of gold and silver plated, sterling, and bronze hollow ware, such as tea sets, loving cups, vases, etc., would consider locating South or West under more advantageous conditions; have an attractive opening for the right manager with capital as treasurer and general manager. Edward Wilbur, 125 Summer St., Boston, Mass.

INDUSTRIES WANTED

WAGON AND BUGGY FACTORY MIDDLESBORO BOARD OF TRADE of Middlesboro, Ky., offers inducements for wagon and buggy factory; free site and exemptions from taxes for five years. For further particulars address W. C. Cockrell, Chairman Wagon-works Committee, Middlesboro, Ky.

SYRUP REFINERY AND SWEET POTATO CANNERY

JACKSON, MISS. Invites correspondence from any thoroughly competent person or persons who understand the business, who would be interested in coming here and erecting and managing a syrup refinery and sweet-potato cannery, the same power for both, if Jackson will give a fine site and substantial bonus. Reply to Jackson Board of Trade.

MISCELLANEOUS

VICTORIA, TEXAS, head of navigation of Guadalupe River; center of cotton, corn, truck and citrus fruit-growing district of South Texas; country rapidly developing; opportunities for many industries. If interested in the coastal section of Texas, write for booklet "D" to the Secretary of the Progressive League.

WANTED—Harriman, Tennessee, a town of five thousand inhabitants, best of shipping facilities (five railroads and river), cheap lumber, coal, iron and water, wants a furniture factory, a knitting mill, an iron furnace, a mining-implement factory, a wood-alcohol plant, a canning factory, a wholesale hardware store—in fact, factories of all kinds; mild, healthy climate and an abundance of pure freestone water for all purposes. For further information address The U. S. Realty Co., Harriman, Tenn.

SUFFOLK—The best manufacturing and distributing point in Virginia; six railroads and water transportation; plenty of labor; cheap fuel; electric power; seventy manufacturing plants in successful operation; opportunity for furniture and woodworking plants and any wholesale jobbing or manufacturing business; center of tidewater; richest farming section to be found; healthy; excellent schools and churches; filtered water, gas and sewer. Write Board of Trade, Suffolk, Va.

CLEVELAND, TENN. WANTS YOU.—The best town in the Southeast, with a hydroelectric development of 32,000 initial horsepower for manufacturing purposes, final development 82,000 horsepower. Free manufacturing sites; exemption from city and county taxes; ample railroad facilities; spring water pumped to all parts of the city; cheap raw materials; 136 miles of pike roads in county; fine farming and trucking section; best of public utilities; cheap white labor; cheap power; ideal location for cotton mill, furniture factory and brick-manufacturing plant; good climate; most rapidly developing city in the Southeast. Write Commercial Club, Cleveland, Tennessee.

WANTED—Asheville, N. C., 31,000 population, including suburbs; 38 miles paved streets; best water on earth; men with capital to invest in money-making enterprises; good opening for manufacturing enterprises. Write Board of Trade.

INDUSTRIAL PLANTS FOR SALE

FACTORY BUILDINGS

FACTORY FOR SALE OR RENT—50x130 feet, two stories, with additions; located on two good railroads in fine town having natural gas and water system. Address F. D. Freeborn, Knoxville, Pennsylvania.

FACTORY BUILDING FOR SALE—Two-story brick concrete building; best drykiln in Oklahoma; warehouse, brick paint or dipping room; trackage suitable for woodwork of any kind. Write for particulars. W. J. Finch, El Reno, Okla.

FOR LEASE OR SALE ON EASY TERMS. Two-story brick factory building, 200x60 feet, with eels, giving total floor space 30,000 square feet, with power, light, heat and water, automatic sprinkling system, 150 H. P. Corliss engine and two boilers. Site 385x230 feet, within corporate limits; abundant help nearby; accessible to electric cars, railroads and steamboat lines. Barton Myers, Norfolk, Va.

FURNITURE AND WOODWORKING PLANT \$40,000.—COMPLETE new furniture, show-case and woodworking plant on sidings of two railway systems, Texas town of 6500 people; good market; material convenient; water free; fuel inexpensive; thoroughly modern plant, ready for immediate operation. Oliver & Remy, San Marcos, Texas.

HANDLE AND SINGLETREE PLANT

FOR SALE—Handle and singletree plant, well equipped, where there is an abundance of available timber to last for many years. Address No. 900, care Manufacturers Record.

PLANING MILL PLANT

FOR SALE OR LEASE AT HOUSTON, TEXAS—A complete planing-mill plant, including buildings and ample ground for yards, located on two railroad tracks and convenient to the city; an excellent site for milling in transit. For particulars address H. C. House, Houston, Tex.

ICE PLANT

FOR SALE—Ice plant, 12-ton Remington, at Tarboro, North Carolina; town of 600 people; will sell cheap to quick purchaser. Come and see or get prices from Chas. N. Nurney, Wilson, N. C.

ELECTRIC LIGHT PLANT

FOR SALE AT A BARGAIN—Complete equipment of an electric-light plant, consisting of one 14x36 mill type Murray Corliss engine, 2 85 H. P. Atlas tubular boilers, 1 Gem City heater, 3 boiler-feed pumps, smokestacks and settings, 1 90 K. W. single-phase A. C. generator, skeleton switchboard and instruments. Will sell all or any part. For prices and description address City Light and Water Plant, Coleman, Texas.

WOODWORKING PLANT AND PLANING MILL

WOODWORKING PLANT AND PLANING MILL, including drykilns, electric plant, etc. Located in West Virginia on navigable stream and railroad. Low freight and water rate to principal cities. Will sell for about half inventory price for quick money. For particulars address P. O. Box 524, Parkersburg, W. Va.

VENEER PLANT

FOR SALE—Veneer machinery and plant; veneer slicer with capacity of 200,000 feet in 10 hours; textile veneer dryer to take care of cut; clippers and all other necessary machinery; boilers, engines and sawmill; veneer slicer especially adapted to cutting mahogany or cedar veneers. Will sell as a whole or separate. Address No. 937, care Manufacturers Record.

SNAD-LIME BRICK PLANT

FOR SALE—Sand-lime brick plant, located at Live Oak, Florida, in a most flourishing community, which is rapidly growing from all standpoints; plant fully equipped and ready for operation; owners are not familiar with its operations, but will take stock with parties who thoroughly understand the business. Write for the full particulars. W. H. & J. H. Dowling, Live Oak, Fla.

MINERAL AND TIMBER LANDS, WATER POWERS AND MISCELLANEOUS PROPERTIES

RELIABLE, accurate and definite information regarding the possibilities for investment in high-grade land propositions in Mississippi and Louisiana; fourteen years' successful operation; references exchanged. Walter G. Hodges, Meridian, Miss.

WRITE for list New Orleans residence lots and factory sites; Louisiana mineral, timber, cut-over and farm lands. Orient Co., Ltd., 513 Audubon Bldg., New Orleans, Louisiana.

NORTH CAROLINA—Rich and extensive deposits of fine quality corundum and alundine garnet (inexhaustible in quantity) for sale by Henry Scharfetter, 217 St. Paul St., Baltimore, Md.

FACTORY SITES, Business Property, Residences and Farms. If interested in the metropolis of the Southwest or its territory, write for free land list and booklet on Houston, Texas (where 17 railroads meet the sea), or make your wants known. Bank references if desired. Central Land Co., 303 Theater Bldg., Houston, Texas.

FOR SALE—Boundary of 256,000 acres in State of Durango, Mexico; good ranch, mineral and timber land; contains 500,000,000 feet yellow pine; railway building within 25 miles of lands; 25-mile tramway to new railway can be built at small cost; 100 miles to Pacific port of entry by rail for ship-loading for use of Panama Canal route and for all American and European shipping markets. We control and can deliver promptly this valuable boundary for \$2.50 per acre; one-fourth down; one, two and three years for balance. Principals only need reply. Address for particulars, J. C. Landley, Greensboro, N. C.

MINERAL LAND FOR SALE containing long and short fiber asbestos in small and large veins and pockets; about 20 outcroppings prospecting 6 to 18 feet deep. Graphite in four forms, crystalline, flake or hard, earthy and graphite quartz veins four feet wide, assaying 5 to 6 per cent. pure graphite. Large talc vein, also large quantity of low-grade talc. Large amount kaolin and yellow ochre, corundum and nickel ore in two places. These minerals cover about 70 out of 100 acres. Location, five miles west of Chipley, Ga., on county line, and five miles from railroad. For further particulars address G. I. Bryan, Chipley, Ga.

COAL LANDS FOR SALE

VALUABLE COAL TRACT FOR SALE—A 4500-acre tract of coal land, located in East Tennessee, containing six workable surface veins of high-grade coal, suitable for steam, domestic and coking purposes, besides several excellent workable veins under the surface. The property is now within four miles of a railroad, and a charter for a new railroad has recently been taken out, the proposed route being through the center of this property. There is between 12,000,000 and 15,000,000 feet of merchantable hardwoods on the tract that can be cut and marketed at a handsome profit just as soon as this property is completed. The price on the property is \$45 per acre, all cash, or \$50 per acre on terms. Blueprints and engineer's report will be furnished genuine buyers who can show financial ability to purchase such a property. Correspondence solicited with principals only; no agents. Address Albert F. Lee, 216 Sixth Ave., Nashville, Tenn.

Classified Opportunities

TIMBER FOR SALE

FOR SALE—40,000,000 feet of first-class hardwood and cypress, situated right on a railroad. Apply to E. J. Iles, Alexandria, La.

50,000,000 to 150,000,000 FEET L. L. Y. P. on L. & N. R. \$2 M. 450,000,000 ft. virgin white pine, tributary Missouri River points, \$1.19 M. fee. 125,000,000 ft. spruce and hemlock, with mill, \$180,000, fee. 600,000,000 ft. hardwood, two thirds white oak, \$1.94 M. fee. Pacific Coast timber, 250,000,000 ft. yellow fir, 50 cents M. 600,000,000 ft. (tidewater), \$250,000, fee. 225,000,000 ft. virgin white pine and red pine, 50 cents M., rights. 100,000,000 to 500,000,000 ft. Western white pine, \$1, fee. Correspondence with principals only. No agents. J. A. Murray, Patton, Pa.

TIMBER LAND FOR SALE

FIFTY THOUSAND ACRES VIRGIN TIMBER in Central Florida. Professional estimate shows hundred and twenty million feet long-leaf pine, ten million swamp cypress; splendid transportation facilities; trunk-line railroad. Best offering in Florida at this time. \$10.50 per acre, fee simple, warranty deed, \$100,000 cash; balance, terms to suit, low interest. Interested parties write or write Marcus E. Sperry, 217 Am. National Bank Bldg., Tampa, Fla.

CUT-OVER LANDS

FOR SALE AT BARGAIN PRICES.—100,000 acres fine cut-over lands in most desirable and rapidly developing sections of Baldwin and Mobile counties, Alabama; large or small tracts for colonization or investment; lands are near Mobile Bay and will greatly increase in value with opening of Panama Canal. Robert Berney, 915 Van Antwerp Building, Mobile, Ala.

CUT-OVER TIMBER TRACTS.
50,000 acres cut-over pine lands, Miss. \$6.50
30,000 acres cut-over pine lands, La. 6.00
75,000 acres cut-over pine lands, Tex. 5.00
15,000 acres cut-over hardwoods, La. 4.50
Marsh Lands for Reclamation.
60,000 acres in a body, Gulf Coast of La. 3.00
Timber Lands.
20,000 acres L. L. Y. pine, Fla., cut 3500 ft. 7.00
15,000 acres L. L. Y. pine, Ala., cut 7000 ft. 21.00
30,000 acres hardwood, cut 10,000 ft. (60% red gum) 10.00
Finest red gum proposition South.
Wm. R. Taylor, 508 Perrin Bldg., New Orleans, La.

SIXTY-FIVE HUNDRED ACRES, practically solid body, cut-over pine land; center of finest trucking section in Florida; skirted by Withlacoochee River; transportation facilities good; have direct from owners; bargain at \$6 per acre; titles perfect; warranty deed. Marcus E. Sperry, 217 Am. National Bank Bldg., Tampa, Fla.

10,730 ACRES Louisiana hardwood timber lands, 104,000,000 ft., on Sabine River, \$15 acre. 20,000 acres rich dark bottom cut-over hardwood, S. W. Arkansas, lands on Ry., \$6 acre. 38,000 acres Louisiana cut-over lands, \$5 acre. Robert Sessions, Winthrop, Ark.

FARM AND TIMBER LANDS
60 ACRES LAND IN FEE SIMPLE, located in North Alabama, unimproved, but has fine lot of hardwood timber—oak, hickory and poplar. Price \$7.50 per acre. Timber worth the money. M. P. Webb Real Estate Company, 201 Jefferson County Bank Bldg., Birmingham, Alabama.

FARM AND TIMBER LANDS.—We have attractive offerings in farm, yellow pine and hardwood timber lands. We also handle coal and are properties. Correspondence from interested parties invited. Provident Trust & Security Co., Land Dept., Walton Bldg., Atlanta, Ga.

I HAVE BARGAINS IN TIMBER TRACTS, large colonization propositions, cut-over lands and reclamation tracts in any size wanted up to 150,000 acres from \$2.50 per acre up.
Wm. R. Taylor, Land and Timber Investments, 508 Perrin Building, New Orleans, La. Established 1898. Sales over \$6,000,000.

ARKANSAS hardwood timber tracts; in touch with owners; have some bargains. Tell county colonization proposition, 15,000 acres, at \$5; timber enough to pay out. Fredricks Realty Company, Springfield, Ark.

COLONIZATION LANDS
11,000 ACRES fine agricultural land, including an entire town of some 50 dwellings and many more assets. Price \$6.50. Vestal & Haygood, Arkadelphia, Ark.

PLANTATIONS FOR SALE
335 ACRES of good hill cotton land for sale; now in successful operation; well supplied with negro labor. The plantation lies between two branches of the Illinois Central Railroad; nearest shipping point, four miles from the dwelling. The land corners within half mile of one of the shipping points. A complete set of cabins for tenants, stables, cribs, cotton pens and all outhouses. Forty-five head of mules and horses, cows, farming implements and feedstuff. Price very low. Terms good. Address A. C. Leigh, Gretna, Miss., bona-fide owner of the property.

FARMING LANDS
WE OWN and offer for sale on easy terms more than 100,000 acres of farming lands in Louisiana and Mississippi. Anyone interested in Southern investments should write us direct and save the middleman's profit. The Lampton Realty Co., 405 Hibernia Bank Building, New Orleans, Louisiana.

FARM AND RANCH LANDS

90,000 acres Durango, price \$1.75 per acre
80,000 acres Coahuila, price 2.25 per acre
80,253 acres Chihuahua, price 2.00 per acre
100,000 acres Sonora, price 3.00 per acre
375,380 acres Durango, price 2.00 per acre
162,783 acres Chihuahua, price 2.00 per acre
135,147 acres Durango, price 3.00 per acre
230,000 acres Coahuila, price 1.50 per acre
3,500,000 acres Chihuahua, price 2.50 per acre
405,000 acres Chihuahua, price 2.00 per acre
20,690 acres Tamaulipas, price 3.50 per acre
70,000 acres Chihuahua, price 1.50 per acre
23,000 acres Chihuahua, price 2.50 per acre
103,355 acres Tamaulipas, price 2.25 per acre
179,648 acres Tamaulipas, price 2.25 per acre
80,250 acres Coahuila, price 2.75 per acre
1,115,640 acres Tamaulipas, price 2.50 per acre
1,396,365 acres Sonora, price .75 per acre
191,000 acres Sonora, price .75 per acre
200,000 acres Durango, price 4.50 per acre
200,000 acres Durango, price 2.00 per acre
100,000 acres Sinaloa, price 5.50 per acre
Cass & Fry, 30 City National Bank Building, El Paso, Texas.

RANCH FOR SALE

IT PAYS FROM THE START.
25,000 acres, near Las Vegas; altitude about 6000 feet; cool summers; mild winters; soil sandy loam and clay loam, very best for sugar beet growing; perpetual free water rights, 34 miles irrigating ditches; 64 miles fencing, cedar posts; 1000 acres alfalfa, plow land, pasture, timber, orchard, grist mill, 23 H. P. W. P. store building, postoffice, warehouse, icehouse, smith shop, cribs, barns, stables, 16-room dwelling, foreman's house, miller's cottage, 10 houses for help; under present management alfalfa crop produces \$25,000 annually; store, mill and warehouse, \$15,000; cattle, grain and orchard, additional revenue; under intelligent, economical management returns can be largely increased. Price \$275,000; \$137,500 cash; balance as may be mutually agreed upon; title perfect; complete report in office. Every item above mentioned can be verified by personal inspection. Benajah White, Agent, 109 N. 7th St., St. Louis, Mo.

PECAN ORCHARDS

FIVE-ACRE PECAN ORCHARDS IN ALABAMA.—I am offering fifty tracts of this size to the first fifty buyers. Now is your opportunity to get a start in this profitable business on easy terms. Monthly payments if desired. I can furnish best of references, and, if preferred, will manage tracts for non-resident owners. Write for full particulars and terms. Oscar V. Case, Fort Payne, Ala.

VALDOSTA, GEORGIA, PECAN PLANTATIONS.—Pecan culture offers aargent returns; five-acre tract on easy payments assures a steady growing income; we take care of orchards for four years; 800 acres under cultivation in budded paper-shell pecans. Write for booklet. South Georgia Real Estate & Development Co., Valdosta, Ga.

APPLE ORCHARDS

440-ACRE APPLE FARM; 20,000 bearing trees; yearly profit \$15,000; located in Arkansas apple belt; \$80 per acre for short time. Vestal & Haygood, Arkadelphia, Ark.

CABBAGE PLANTS

AN ACRE OF CABBAGES near a town or village will net over two hundred dollars. We have twenty-five acres in cabbage plants of all improved varieties, grown in the open air, and are positively frostproof. Will make large heads. Price, 1000 to 5000, \$1.25 per thousand. Special prices over 5000. Packed in neat boxes and tied in bunches if desired. Special express rates. The Sea Island Plant & Seed Co., Meggetts, S. C.

ORANGE GROVE

FLORIDA ORANGE GROVE.—Forty acres, 500 trees, 7-room house, on beautiful lake, near live town; good trucking land. This place sold several years ago for \$10,000. On account of death of owner we offer for immediate sale at \$7500, half cash. This property can be made to pay well and is a big bargain. King & King, Jacksonville, Fla.

FARM, FRUIT AND TRUCK LANDS

ALABAMA

FOR A HOME OR FOR INVESTMENT let us write you interestingly of more than 400,000 acres of desirable land which we have for sale at wonderfully low prices in Alabama. Any location, large or small farm, pasture and fruit lands. Picking out bargains throughout the State is our daily business. Alabama State Agricultural Land Co., Center, Ala.

CUBA

SPLendid TRACT, timber, crossties, water-power, colonies, fruit, coffee, chocolate, stock; finest soil, climate, health, transportation; \$6.40 per acre. J. O. Andrews, Gainesville, Fla.

FLORIDA

FLORIDA FARMS ARE FORTUNES.—Our soil similar to fertile sections Iowa, Missouri; easy-payment plan. Write for booklet. Milton Land & Investment Co., Marianna, Fla.

WRITE US for listings covering open and improved tracts of citrus and vegetable lands in all parts of Florida; many attractive offerings. Our specialty: Tampa and suburban property. Have an exceptionally fine subdivision proposition; platted and ready for market; forty acres; frontage on eighty-foot paved street; ten minutes from center of Tampa; listed with us exclusively at a bargain. Telegraph or write Sperry Land Company, 217 American National Bank Bldg., Tampa, Fla.

FLORIDA FRUIT AND TRUCK LANDS.—We offer 10-acre tracts in that part of the State of Florida lying in Hillsborough county and Lake Butler region, in the Pinellas peninsula, on the west coast of Florida, on the Gulf of Mexico; with its elevation and rolling hills is especially suited for fruits of all kinds—grapefruit, oranges, grapes, dates, figs, bananas, peaches and other fruits, as well as vegetables, potatoes, corn, beans, peanuts and all the varieties that can be produced anywhere. The Tarpon Springs district offers the most favorable conditions for farmer, home secker and investor. Fertile lands in small tracts, easy monthly payments; guaranteed title. Investigation invited. If you want a bargain and a home in the most desirable part of Florida, write now for particulars and reservation. Tampa & Tarpon Springs Land Co., Tampa, Florida.

GEORGIA

A GEORGIA BARGAIN.—375 acres Liberty county; 7-room dwelling; large barn, many outbuildings, cattle sheds, etc.; 130 acres in cultivation; 18-acre pear orchard; 50 bearing pecan trees, best varieties; 200 acres fine timber; good neighbors, church and school; no better soil in Georgia; crops never fail; healthy; near salt river; three miles from railroad station. R. K. Walker, Citizens' Trust Bldg., Savannah, Ga.

300 ACRES of the best improved farm lands in Fayette county; nice 6-room dwelling, 6 tenant-houses, 2 barns and several out-houses on the place; buildings alone worth \$5000; in 1½ miles of growing town. This is an ideal country gentleman's home and is a pick-up at \$15,000; must be sold at once. Address Owner, P. O. Box 102, Senola, Ga.

LOUISIANA

HEADQUARTERS FOR NORTH LOUISIANA LANDS.—Large and small tracts, suitable for plantations, small farms, orchards or truck gardens. Climate, soil and health conditions here are unsurpassed. The staple crops of the North grow in this section alongside of cotton and cane. A great stock country. Write for particulars, stating your requirements. References, my customers and any bank in Shreveport. W. A. Jones, Authority on North Louisiana Lands, Shreveport, La.

FORTY-ACRE TRUCK FARMS for sale in the famous strawberry belt of Louisiana; on main line of Illinois Central Railroad. Price \$25 per acre on easy terms. Similar lands only a few miles distant are selling as high as \$75 per acre. The Lampton Realty Co., 405 Hibernia Bank Building, New Orleans, Louisiana.

MISSISSIPPI

FORTY-ACRE FARMS in George county, Mississippi, 25 miles northwest of Mobile. This is one of the most-favored general farming sections of the entire South, and no better values can be found anywhere. Price \$25 per acre on easy terms. The Lampton Realty Co., 405 Hibernia Bank Building, New Orleans, Louisiana.

MISSOURI

IN THE BEAUTIFUL OZARKS.—Cheapest good land on earth, farms, timber tracts, fruit lands; finest springs; mild, healthful climate. For bargain list write Globe Realty Co., Ava, Mo.

NORTH CAROLINA

WANTED.—Men to become independent farmers in Eastern North Carolina, the "Nation's Garden Spot." Leads for large profits on small capital. Write for booklet. C. Van Leuven, 815 Southern Bldg., Wilmington, N. C.

SOUTH CAROLINA

FOR SALE—825 acres fine cotton land, 5 miles from Aiken, S. C., on good clay automobile road and R. F. D. route; 10 tenant-houses; 3 splendid dwellings; everything complete. Write me for particulars. Box 1071. Frank E. Courtney, Augusta, Georgia.

TENNESSEE

FOR SALE—150-acre farm, good location, near station; 80 acres in cultivation; balance in timber. Part cash; balance to suit purchaser. Address Box 154, Etowah, Tenn.

TEXAS

6000 ACRES of the best black hog-wallow land in the South, located in Calhoun county, Texas, on the coast; the finest cotton, cane, truck and fruit land in the world; only \$30 per acre; this land in small tracts would bring \$60 per acre. T. E. Haney & Co., Amicable Bldg., Waco, Texas.

Irrigable land near Pecos, Texas. Adjoining land bringing \$10 more. Climate unexcelled; unsurpassed transportation facilities; great opportunity for investor. Land values increasing with astonishing rapidity. This land will bring \$100 before 1930. Investigate this fully. It will pay you. I must sell or I would hold for and get \$100 in next five years. Address J. R. Hobbs, Shelbyville, Tenn.

2464-ACRE FARM on Lavaca River, 5 miles north of Edna, Texas; 500 acres river bottom field; 10 small rent houses; one 10-room ranch house; private phone line out of Edna; all fenced; several wells; 3000 bearing pecan trees; will sell or trade for good city property at \$35 per acre. Emil Locke, 712 Gibbs Bldg., San Antonio, Texas.

THE BLACK LANDS OF NORTH TEXAS are justly famous as the best in the world for the production of cotton, corn, wheat and oats—not one crop, but four. Once Goodwin's Denton Creek Subdivision consists of more than 8000 acres of this land, situated on the Denton and Wise county line, 50 miles northwest of Dallas, and is offered at reasonable prices—thirty to forty dollars per acre—and upon such terms that any man with a few hundred dollars cash can easily meet. The gradual and steady enhancement in value of such land should appeal to investors, while the very easy terms upon which it is offered should appeal to the farmer without a home. Address Fount Ray, Decatur, Texas.

TEXAS COAST COUNTRY BARGAIN.—8000 acres fruit and general farm land surrounding a railroad station at small towns 55 miles from city; 800 acres now in cultivation; only \$12 per acre; terms if desired. C. H. Stancil Land Co., Houston, Texas.

RICHEST FARM AND FRUIT LANDS, IN FAMED BEE COUNTY, 60 MILES FROM GULF, IN THE RAIN BELT.—Old Wilson ranch, 18,700 acres, in small tracts, 40 to 640 acres, each facing roadway; close to railroad; good automobile roads; finest black sandy loam; clay subsoil; no rock; practically no waste land; gently undulating; perfect drainage; good water; coming truck and citrus fruit section; can raise winter vegetables, then plant cotton or corn; climate balmy and healthy; gulf breeze makes summer nights delightful; no malaria nor mosquito; extensive development going on. Write for booklet. Low price; easy terms. If wanted, will sell 5000 or 9000 acres in a solid block at especially attractive figure. Theodore Plummer, Owner, 540 Moore Bldg., San Antonio, Texas.

WELL-IMPROVED FARM FOR SALE.—500 acres, adjoining and same quality as land described next above; 300 acres in cultivation, all fenced and cross-fenced; excellent farm improvements; best in that section of country; ideal Southern home. For quick sale at low price. Terms, 1 to 5 years. Write for full particulars. Theodore Plummer, Owner, 540 Moore Bldg., San Antonio, Texas.

ORANGE LAND.—Texas gulf coast orange, fig and garden farms; \$15 down and \$15 per month; black loam prairie; good roads, schools, churches and markets; between Houston and Galveston. Send for illustrated literature. Agents wanted. L. Bryan & Co., Houston, Texas.

10,000 ACRES Nueces River bottom land; all subdivided into small tracts; very best truck and fruit land in Southwest Texas; will sell in small tracts or in a body. Emil Locke, 712 Gibbs Bldg., San Antonio, Texas.

COTTON AND CORN LAND.—12,500 acres, near two good railroads, being one mile from one and two miles from the other; splendid colonization tract; at \$10 per acre; one-fourth cash; balance 6 per cent. Address owner, Dr. C. S. Preston, 1007 Scanlan Bldg., Houston, Texas.

JAS. GOODE REAL ESTATE CO., ranch and irrigated lands. Office, Orient Hotel, Pecos, Tex.

THE FRIO VALLEY WINTER GARDENS, La Salle county, Southwest Texas, a colony of 100,000 acres level rich black sandy loam in famous artesian belt; grow oranges, figs, Bermuda onions. We are opening Fowerton, a new town on new railroad in heart of the colony. Guaranteed improvements on town-site. A 10-acre farm and free residence on terms of \$15 cash; balance \$10 monthly. Write for booklet A, prices, plots, etc. Fowler Brothers Land Co., Frost Building, San Antonio, Texas.

BISHOP, TEX.—Fastest growing town in Southwest Texas; cotton, fruit and vegetable land unexcelled. Write for booklet and sworn statements. Commercial Club, Bishop, Tex.

FOR SALE—235½ acres prairie land, located on Santa Fe Railroad and on public road (shelled) only 13 miles from Beaumont and one-quarter mile from Fannett; suitable for general farming or for subdividing into smaller tracts. Title perfect. Price \$27.50 per acre. Also other lands suitable for subdivision. Texas Realty Co., Beaumont, Texas.

WEST VIRGINIA

FOR SALE—1002 ACRES WEST VIRGINIA APPLE LAND.—This property is located six miles from Berkeley Springs, Morgan county, West Virginia, and is about four miles from the railroad at Great Cacapon. There are ample cold-storage facilities available at Berkeley Springs, six miles from the property. This property is good for apples and is in a famous apple section. Many of the large orchards where fine fruit are grown are near this land. There is 300 acres of bottom land, and 50 acres of same is cleared; balance is in timber. Most of the land is available for horticulture, and ideal orchard sites abound. The soil is especially rich and productive. It is well watered, and water can be carried to all parts of the tract with pipes for purposes of gravity spraying. The owner agrees to have this land surveyed and sell the same on the basis of \$12.00 an acre for whatever the survey shows. Address West Virginia Tri-Products Company, Morgantown, W. Va. Howard L. Swisher, Pres.

Classified Opportunities

MACHINERY AND SUPPLIES

WANTED.—Every consumer in the Southwest to know that the Texas Rolling Mill Company of Fort Worth, Texas, manufactures track spikes, track bolts, machine bolts and nuts; also standard sizes of bar iron. One hundred tons always in stock. Prompt shipments our specialty. Satisfaction guaranteed.

LOCOMOTIVES FOR SALE

FOR SALE.—Ten locomotives, suitable for tramroad and sawmill purposes. Now being rebuilt at Tampa Northern Shops. Aripeka Sawmills, Tampa, Fla.

FINANCIAL

\$1,000,000 OF 6% BONDS, secured by first mortgage on productive real estate, minimum value of which is eight to ten times the face of bonds. Proceeds to be used for further improvements. Property situated in one of the most resourceful and rapidly developing districts in the Southwest. Would sell all or a part of issue. Responsible parties only. Address J. L. Farley, care of Manufacturers Record, Baltimore.

FOR SALE CHEAP

1 No. 4 Climax Crusher, 150 tons daily.
1 No. 4 Climax Crusher, Elevator and Screen.
Otto Gas Engine, 35 H. P., with 500 light dynamo.

Good condition—Cheap for Cash—Seen any time

Consolidated Broken Stone & Gravel Co.
PORTLAND, MAINE

8 PER CENT. 5-YEAR OKLAHOMA FARM MORTGAGES.—Yes, rate is high but sure and easily paid; conditions warrant it, and you get benefit; lands cheap, rich; values doubling; 25 years' experience in Southwest; 10 years bank cashier here; know people, lands, laws, resources, local conditions; never lost a mortgage nor had a title contested; abundant references; circular; investigate. J. G. James, Roff, Oklahoma.

8% PREFERRED STOCK, free of taxes, backed by real estate in a progressive city, for sale in amounts from \$100 to \$15,000. Will bear close investigation. For particulars address Box 148, Charlotte, N. C.

SAVANNAH, GA.—Real estate loans paying 6 per cent. to 7 per cent. to the investor; absolutely safe. Beautiful sites for winter homes at Vernon View, the salt-water place near Savannah on the Grand Prize Course; ideal winter climate. G. A. Mercer, Law and Real Estate, Savannah, Ga. References: Any bank or trust company in Savannah.

PATENT ATTORNEYS

EUGENE C. BROWN, ENGINEER and Patent Lawyer, Suite 40 Victor Bldg., Washington, D. C., Member Bar U. S. Supreme Court. Patents and Trademarks; Patent Suits for Infringement. Mr. Brown is especially qualified to prosecute cases in Patent Office and patent litigation from both Engineering and Legal standpoints, having been Examiner in U. S. Patent Office for nine years. Send sketch for advice.

PATENT YOUR IDEAS.—\$100,000 offered for one invention, \$5000 for another; book, "How to Obtain a Patent" and "What to Invent," sent free; send rough sketch for free report as to patentability; patent obtained or fee returned. We advertise your patent for sale at our expense. Chandiee & Chandiee, patent attorneys, 978 F street, Washington, D. C.

PATENTS Secured or Fee Returned. Send sketch for free report as to patentability. Guide book and what to invent, with valuable list of inventions wanted, sent free; \$1,000,000 offered for one invention; \$15,000 for others. Patents secured by us advertised free in World's Progress; sample free. Victor J. Evans & Co., Washington, D. C.

IDEAS WANTED.—Manufacturers are writing for patents procured through me. Send for free 72-page guide and "Stepping Stones" (containing over 300 inventions wanted). Personal services. Clients' patents sold free. Trade-marks registered. R. B. Owen, Dept. 12, Washington, D. C.

PATENTS FOR SALE

WE HAVE recently secured the following patents. Address all communications to Sales Dept., Victor J. Evans & Co., Washington, D. C.: David N. Weathers, door lock; James H. Venners, traction engine; Geo. Stroner, tool holder; Chas. H. Stedman, ball brace; Geo. E. Babbitt, door for hopper-bottom cars; Thos. Grizzle, hog ringer; P. L. Johnson, convertible street car; Harold N. Moore, train pipe coupling; A. Krueger, harrow attachment; Chas. H. Merritt, car attachment; Newton H. Turner, shields for car wheels; Edwin C. Hamilton, baby carriage; W. P. Arnst, mailing catcher and deliverer; Thos. J. Cahill, safety fire arm; Frank Still, railway tie; James T. Phares, cross and switch tie; Oliver C. Blair, train pipe coupling; W. T. West, splicer; James M. Rafter, rail device; John F. Dvorak, weeder; Mrs. Ellen M. Condos, extensible car step; W. S. Clark, magazine pipe; S. H. Riley, wire splicer and tightener; Chas. R. Buton, inkwell; M. F. Smith, miner's safety lamp; E. F. Lowe, weed cutter.

COMPLETE SAW MILL PROPERTY FOR SALE

Sawmill property at Ford River, Mich., consisting of three-hand-saw mill, shingle mill, tie and post mill, lath mill, docks and trams, blacksmith shop and machine shop all stocked with tools, large store and office building, large boarding-house, large barns, sixty-three houses, lands, etc., all of which will be sold at a bargain. Apply to
THE I. STEPHENSON COMPANY,
Wells, Delta County, Mich.

STEEL RAIL WANTED

We want from one to four thousand tons of fifty-six-pound steel relayer rails on lease from three to five years, with privilege of buying during that time, and with agreement to buy at end of that period. We will pay very liberal rental on rail. We have a good proposition. Address

J. A. WILLIAMS, Bamberg, S. C.

COMPRESSOR FOR SALE CHEAP

One (1) Castle Compressor, used on 40-ton tank, in good running order, for sale cheap.

WIGGINS ICE COMPANY,
Wiggins, Miss.

RAILS - RAILS - RAILS



We have in stock and can make prompt shipment of all weights of No. 1 relaying rails and angle bars. Subject to inspection.

THE HYMAN-MICHAELS CO., Chicago, Ill.
Successors to BLOCK-POLLAK IRON CO., Chicago.

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Regular

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PROPOSALS

PUBLIC BUILDINGS.

CONSTRUCTION BONDS

MISCELLANEOUS.

GOVERNMENT PROPOSALS

PROPOSALS FOR ROSE, PACKING, Gaskets, Tape, Rubber Gloves, Lamp Sockets, Pot Heads, Fuses, Electric Switches, Wire, Pipe Fittings, Cocks, Grease Cups, Boat Spikes, Tacks, Grommets, Stocks and Dies, Oilers, Buckets, Coal Baskets, Mop Handles, Tool Handles, Ladders, Tie Plugs, Gauge Glasses, Building Brick, Sheet Lead, Solder, Lye, Linseed Oil, Chrome Green, Twine, and Blotting Paper. Sealed proposals will be received at the office of the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 A. M. February 3, 1912, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 677) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City, and 614 Whitney-Central Building, New Orleans, La.; also from the U. S. Engineer Offices in the following cities: Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala.; and Galveston, Tex.; Commercial Club, Kansas City, Mo.; and Chamber of Commerce, Quincy, Ill. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

PROPOSALS FOR WATER METERS, CAR SPRINGS, Tie-Plates, Nuts, Hand Cars, Sledge Handles, Garbage Cans, Manila Rope, and Fire Clay. Sealed proposals will be received at the office of the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 A. M. February 3, 1912, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 677) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City, and 614 Whitney-Central Building, New Orleans, La.; also from the U. S. Engineer Offices in the following cities: Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala.; and Galveston, Tex.; Commercial Club, Kansas City, Mo.; and Chamber of Commerce, Quincy, Ill. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

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WAR DEPARTMENT, U. S. Engineer Office, Montgomery, Ala., January 24, 1912. Sealed proposals for dredging in Carrabelle Harbor, Fla., will be received at this office until one o'clock P. M. February 23, 1912. Information on application. G. D. FITCH, Lt.-Col., Engrs.

MISSISSIPPI RIVER COMMISSION, First and Second Districts, U. S. Engineer Office, Memphis, Tenn., January 8, 1912. Sealed proposals for furnishing one locomotive crane will be received at this office until 12 o'clock noon February 8, 1912, and then publicly opened. Information on application. CLARKE S. SMITH, Major, Engrs.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., January 20, 1912. Sealed proposals will be received in this office until 3 o'clock P. M. on the 24 day of March, 1912, and then opened, for the construction, complete (including plumbing, gaspiping, heating apparatus, electric conduits and wiring, and interior lighting fixtures) of the United States Postoffice and Custom-house at Corpus Christi, Tex. The building is to be of 4400 square feet ground area, two stories and basement, stucco finish, with tile roof. Drawings and specifications may be obtained from the custodian of site at Corpus Christi, Tex., or at this office, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., January 16, 1912. Sealed proposals will be received in this office until 3 o'clock P. M. on the 27th day of February, 1912, and then opened, for the construction (including plumbing, gaspiping, heating apparatus, electric conduits and wiring, and interior lighting fixtures) of the United States postoffice at Union, S. C. The building to be one story and basement, of approximately 4117 square feet ground area, brick faced, with stone trimming and tin roof. Copies of the drawings and specifications may be obtained from the office of the custodian of the site at Union, S. C., or at this office, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

NEW BOND OFFERINGS

\$100,000 5% Improvement Bonds For Sale

\$100,000 Improvement 5 per cent. City of Bainbridge, Georgia. Bonds. Bids received Monday, March 4, 1912. Write for particulars.

W. O. FLEMING, Clerk.

\$490,000 4 1/2% Bonds

Sealed bids will be received up till noon February 10, 1912, at the office of the County Judge, in the Municipal Building, Chattanooga, Tenn., for the following interest-bearing coupon bonds of Hamilton county, to wit:

\$350,000 for courthouse, \$75,000 for jail, and \$65,000 for Lookout Mountain road.

Said bonds will be dated April 1, next, and will run for thirty years, except the road bonds, which will run twenty years, each of the denomination of one thousand dollars, interest four and one-half per cent., payable semi-annually, and without right of option. Must be sold at or above par. Each bidder who bids on all three of said series will be required to deposit a certified check with his bid for \$3000, payable to the County Judge. If bid is submitted alone for any one series, then certified check for \$1000 shall be deposited with bid. Said sum is to be forfeited to the county in the event the successful bidder shall fail to carry out his contract. Said bids will be opened and contract let at said time and place. The right is reserved to reject any or all bids. For further information write the undersigned.

JOE V. WILLIAMS, County Judge.

This January 18, 1912.

PROPOSALS

PUBLIC BUILDINGS.

CONSTRUCTION BONDS

MISCELLANEOUS.

NEW BOND OFFERINGS

Road Bonds

Fulton Special Road District, Callaway County, Mo. Total issue \$100,000. Denomination \$1000. Rate 5 per cent. payable semi-annually, in March and September. No option. A certified check for \$5000 must accompany all bids. Bids received until 2 P. M. February 15, 1912. For further information write N. T. Cave, Atty., Fulton, Mo.

Sale of Municipal Bonds

The Town Council of the Town of Shelby, North Carolina, asks for bids on \$15,000 five per cent. 15-year municipal bonds of said town, to be sold Tuesday, February 6, 1912, at 2 P. M., for the purpose of purchasing an Electric-light Plant, which is already in operation in said town. All bids to be sealed and accompanied by a certified check, payable to the Treasurer of the Town of Shelby, for five per cent. of the amount of the bid. Right to reject all bids is reserved. All bids and inquiries for further particulars should be directed to

J. T. GARDNER, Mayor,
Shelby, N. C.

Bonds For Sale

For Sale—\$240,000 Mecklenburg County Bonds, to run 32 years; coupons; 5 per cent. interest, payable May 1 each year, and not less than five bonds to be paid each year on May 1. These bonds are issued for permanent road improvement in five magisterial districts in the county. Bonds to be delivered March 1, 1912, and paid for in cash at the Treasurer's office in Boynton, Va. The interest for March and April, 1912, to be deducted from the purchase of the bonds. Bids will be opened by the full Board in session at Boynton, Va., January 29, 1912. A certified check of \$1000 must accompany each bid. The Board reserves the right to reject any bid. Address bids to Chairman Board of Supervisors, Boynton, Va.

For information address any one of the Committee.

L. H. HAYES, Union Level, Va.
L. GREGORY, Chase City, Va.
R. T. GORDON, Clarksville, Va.
R. L. THOMASON, Skipwith, Va.
C. S. HUTCHESON,
Clarksville, Va., R. F. D. No. 4
W. H. RYLAND, Dockery, Va.
SAML. A. WARREN, Bracey, Va.
L. J. PEOPLES, Keats, Va.
Committee.

December 18, 1911.

\$25,000 5% Bonds

ADVERTISEMENT—CHANGE OF DATE.

The Mayor and Council of the City of Claxton, Georgia, will receive sealed bids until 10 o'clock A. M. February 12, 1912, for the purchase of the following bonds of said city:

\$25,000 water-works and electric-light bonds. Said bonds are of the denomination of \$1000 each and bear interest at the rate of 5 per cent. per annum.

The interest is payable annually at such place as may be designated by the purchaser. Five thousand dollars of said bonds is to become due and payable at the end of ten years, ten thousand dollars at the end of twenty years, and the remaining ten thousand at the end of thirty years.

Bonds will be dated January 1, 1912. All bids must be accompanied by a certified check for 2 per cent. of the amount of the bonds bid for.

This bond issue was validated by the Superior Court of Tattnall County, Georgia, on the 21st day of December, 1911.

The Mayor and Council reserve the right to reject any and all bids.

Direct all bids to Mayor and Council, Claxton, Georgia.

J. P. MOORE, Mayor;
J. M. COLLINS,
C. NEWTON,
REMER E. DeLOACH,
J. H. RUSHING,
J. S. HENDRIX,
Council.

\$15,000.00 Morehead City, (North Carolina) Municipal Bonds, Interest 5½ Per Cent.

The town of Morehead City, North Carolina, requests bids for (\$15,000) fifteen thousand dollars par value five and one-half per cent. thirty-year coupon bonds, interest payable semi-annually, to be issued for the purpose of paying the floating indebtedness caused by extending the water-works and electric-light system and street improvements. Sealed proposals will be received for the same up to eight o'clock P. M. the 4th day of March, 1912, and the same will be opened and publicly read at the meeting of the Board of Commissioners that day. Each bid must be accompanied by a certified check for the amount of five hundred dollars (\$500) as guarantee of entering into the contract according to the terms of the contract if accepted.

The city reserves the right to reject any or all bids and to accept that which may seem to be to the interest of the city of Morehead City. Principal and interest payable at the city of New York.

R. N. AYCOCK, Secretary.

\$150,000 Bonds

Sealed proposals will be received by G. Lee McGlasson, Clerk, Gainesboro, Tennessee, until 2 o'clock P. M. March 16, 1912, for \$150,000 Coupon 30-20 Jackson County, Tennessee, Good Roads Bonds. Same not to exceed 4½ per cent. interest. Bonds to be dated, delivered and paid for as follows:

\$50,000 April 1, 1912.
\$50,000 October 1, 1912.
\$50,000 April 1, 1913.

Interest payable annually April 1 of each year. Denomination, \$1000. Bids will be considered for all or any portions of said bonds. Bids must be accompanied by certified check for 10 per cent. of bid, payable to order of Trustee, Jackson County, Tenn., as a guaranty of good faith. No bid considered for less than par. Right to reject any and all bids reserved.

T. M. GAILBREATH, Chrm. Co. Crt.
G. LEE MCGLOSSON, Clk. Co. Crt.
J. M. DEAN, Sect. G. R. Commr.
Gainesboro, Tenn., January 10, 1912.

North Carolina Drainage District Bonds, Issued Under the Laws of the State, For Sale.

Sealed bids will be received at the office of the undersigned at Dover, North Carolina, until February 15, 1912, at 12 o'clock M. for the purchase of forty-five thousand dollars (\$45,000) Moseley Creek Drainage District Bonds to be issued in accordance with the laws of the State of North Carolina, Public Acts of 1909, as amended by Public Laws of 1911, bearing interest at 6 per cent. per annum, payable semi-annually; said bonds payable in ten (10) equal installments; the first installment of principal to be due and shall mature at the expiration of three (3) years from date of issue, and one (1) installment for each succeeding year for nine (9) additional years; to be issued in denominations to suit purchaser, and payable at such time and place as may be designated by purchaser upon acceptance of bid.

These bonds are exempt from all county or municipal taxation or assessment, general or special, and the interest thereon shall not be subject to taxation as for income, nor shall said bonds be subject to taxation, nor the coupons thereon, when constituting a part of the surplus of any bank, trust company or other corporation, and are deductible from the assets of such corporation in ascertaining the taxable value of the shares of such corporations.

Bids invited for the whole or any part of said bonds. Certified check of proposer in the sum of \$500 required to accompany bids for the whole of such issue, or proportional part less than for whole.

Right to accept any and all bids reserved. Bidders may submit form of bond with bid, or the same will be issued in form requested by successful bidder at the time of acceptance of bid.

All further information concerning legality of issue may be had by application to Gulon & Gulon, Attorneys, New Bern, North Carolina.

All bids must be submitted to the undersigned at his office at Dover, North Carolina. This December 30, 1911.

PRESIDENT MOSELEY CREEK
DRAINAGE DISTRICT.

PUBLIC BUILDINGS

Wanted---Propositions to Finance and Build City Hall and Courthouse.

January 15, 1912.

The City of Fort Smith, Arkansas, and the Fort Smith District of Sebastian County, Arkansas, have concluded to build a City Hall and Courthouse, to cost about \$250,000. The city owns the block on which the building is to be constructed, worth \$100,000. The city can pay \$25,000 per annum, and the district can pay \$20,000 per annum. Propositions to finance and build wanted. Address JOHN W. HAVELL, Chairman, Fort Smith, Arkansas.

Proposal for Erection of Hamilton County Jail, Chattanooga, Tenn.

Until 2 o'clock P. M. February 15, 1912, sealed proposals will be received by the Courthouse Commission at their office in the Hamilton National Bank Building, Chattanooga, Tenn., for the erection of the Hamilton County Jail.

Plans and specifications may be obtained from Barnwell & Jones, architects, Chattanooga, Tenn., after January 15, on deposit of \$25.

A certified check in the sum of \$2500, payable to M. M. Allison, chairman, must accompany each proposal. The successful bidder shall furnish a bond acceptable to the Commission in the sum of one-third of the contract price.

Proposals to be based upon monthly payments to be made upon architect's estimate of completed construction of 50 per cent. of said estimate. The balance of 50 per cent. to be paid upon completion, and acceptance of said work.

The right to reject any or all bids is hereby reserved.

M. M. ALLISON,
Chairman.

Notice to Jail Builders

Bids will be received until 2 P. M. 14th day of February, 1912, for the erection of a County Jail in Moulton, Ala. Plans can be seen in the office of J. C. Kumpke, Judge of Probate, Moulton, Ala., and also in the office of Wm. S. Hull, Architect, Jackson, Miss.

CANALS, ETC.

Construction of Drainage Canals

Sealed proposals for the construction of drainage canals in the Mosely Creek Drainage District, near Dover, N. C., will be received by the Drainage Commissioners of said district at Dover, N. C., up to 12 o'clock M. February 16, 1912, and at that time they will be publicly opened and read. Each proposal shall be enclosed in a sealed envelope and addressed to the Chairman of the Board of Drainage Commissioners of the Mosely Creek Drainage District, Dover, N. C., and endorsed "Proposal for Constructing Drainage Canals."

Each proposal shall be accompanied by a certified check drawn payable to the order of the Chairman of the Board of Drainage Commissioners, in the amount of one thousand dollars (\$1000); this check to be an evidence of the good faith of the bidder, and to be held as liquidated damages in case the award is made and the contract and bond are not entered into promptly. Checks of unsuccessful bidders will be returned as soon as the award is made.

Specifications and blank forms of proposal will be furnished upon application, and a full set of maps, plans and profiles may be seen at the office of the Drainage Commissioners, or at the office of the Engineer to the Board of Commissioners at New Bern, N. C.

The approximate length of these canals is 14 miles, and the approximate yardage to be excavated is 415,000.

The right is reserved to reject any and all bids.

G. V. RICHARDSON,
Chmn. Bd. Commissioners.
R. R. EAGLE, Engineer.

Drainage Canal

NOTICE TO CONTRACTORS.

On January 31, 1912, at the Courthouse in Selmer, Tenn., contract will be awarded to the lowest responsible bidder for the construction of a drainage canal in Big Muddy Bottom, in Southern portion of McNairy County, Tenn.

Approximate Specifications.
(Engineer's report, map, profile, etc., on file in County Court Clerk's office.)
Length—Seven and one-half miles.
Width—Average top, twenty-three feet; bottom, eight feet.

Depth—Average, seven feet.

Clearing way to be included.

Time—Work to begin April 1 to 15, 1912; completion within one year.

Ten per cent. deposit, cash or certified check, with J. S. Houston, Treas., Guys, Tenn., with each bid. Right to reject all bids reserved.

Contractor to make bond or deposit, twenty-five per cent. of bid.

Terms—Eighty per cent. of proportion earned paid monthly; balance when work completed.

Bids in writing, either sealed or open, received and filed any time, and further particulars given on application by either

J. S. HOUSTON, Sec.,
Guys, Tenn.
or T. B. WHITEHURST, Chmn.,
Selmer, Tenn.

Levee Work and Clearing Land

NOTICE TO CONTRACTORS.

The Fourche Drainage District will receive sealed bids Tuesday, January 30, 1912, till 2 o'clock P. M., at the office of the engineers, for building approximately 300,000 cubic yards of river protection levee along the Arkansas River and Fourche Bayou, in Pulaski County, Arkansas.

A bidder's bond of \$500 must accompany each bid.

The right is reserved to reject any or all bids.

Sealed bids will be received at the same place and till the same time for clearing approximately 500 acres along Fourche Bayou, in Pulaski County, Arkansas.

A bidder's bond of \$500 must accompany each bid.

The right is reserved to reject any or all bids.

Specifications for the above work will be ready January 10, 1912.

Wm. M. Kavanaugh, President.

Warren E. Lenon, Secretary.

LUND & HILL, Engineers.

Little Rock, Ark., December 23, 1911.

PAVING

Paving

Sealed proposals will be received by H. M. Ringo, City Clerk, Mt. Sterling, Kentucky, on or before February 14, 1912, at 7 o'clock P. M., for the paving with vitrified brick on concrete foundation with concrete curb and gutter of about twelve thousand (12,000) square yards of streets.

W. A. SAMUELS, Mayor.

Proposals for Street Paving

ROME, GA.

Proposals will be received by the undersigned until 12 o'clock noon February 14, 1912, for grading, curbing and paving certain streets with either wood blocks, vitrified brick, Hassam compressed concrete, asphalt-macadam, sheet asphalt or bitulithic material. The work will embrace approximately furnishing and setting 6500 linear feet of curb, foundations and surfacing 17,000 square yards of pavement.

Specifications may be obtained from and plans and profiles seen at the office of the Supervising Engineer, Rome, Ga., and general information from the undersigned.

The right is reserved to reject any or all bids.

BOARD OF PUBLIC WORKS
OF ROME, GA.
R. A. DENNY, Chairman.
W. M. WILSON, Supervising Engineer.

MISCELLANEOUS

Chairs

The City Council of Bay Minette, Ala., will on February 19, 1912, open bids for the purchase of about 325 chairs suitable for a school chapel, f. o. b. cars Bay Minette, Ala. The right is reserved to reject any or all bids. Address

W. D. STAPLETON, Mayor,
Bay Minette, Ala.

Roads, Bridges and Docks

The Board of County Commissioners of St. Lucie County, Florida, will receive sealed bids for the construction of approximately sixty (60) miles of hard-surface roads, also bridges and docks, for which bonds for \$200,000 have been issued, at a meeting to be held in the Courthouse, Fort Pierce, Fla., February 7, 1912, 2 P. M. The Board reserves the right to reject any or all bids. Plans, profiles and specifications may be seen at the County Clerk's office, Fort Pierce, Fla., or at the office of D. D. and C. M. Rogers, Engineers, Fort Pierce and Daytona, Fla.

Reservoir, Charlotte, N. C.

Sealed proposals will be received by the Board of Water Commissioners of the City of Charlotte, at the office of the Clerk, until 5 P. M. February 1, 1912, for building a Reservoir.

The work will include about 55,000 cubic yards of embankment, 6000 square yards 6-inch concrete slope, 600 cubic yards concrete core wall.

Clearing, grubbing, stripping, etc.

Plans and specifications will be on file at the offices of the Clerk and the Engineer in Charlotte, N. C. Copies of the specifications, form of proposal, etc., will be furnished on deposit of ten (\$10) dollars, which will be refunded on the return of same.

As an evidence of good faith each bid must be accompanied by a certified check for \$2000.

The right is reserved to reject any or all bids.

BOARD OF WATER COMMISSIONERS.

A. H. Wearn, Clerk.

Engineer:
GILBERT C. WHITE.

Bids for Water, Light Plant and Sewerage System, Lexington, Tenn.

Bids will be received by the Mayor and Board of Aldermen of Lexington, Tenn., up until 2 P. M. February 8, 1912, for a system of water-works, electric-light plant and sewerage, consisting of the following:

5.3 miles of 4, 6, 8 and 10" water mains, with necessary hydrants, valves, steel tower and tank, reservoir, power station, including boilers and auxiliaries, domestic pump and fire pump of three-quarters million gallon capacity.

Electric Light.—One 100 K. V. A. generator, engine type; one 50 K. V. A. generator, engine type; two high-speed automatic engines to drive same; street-lighting system, consisting of 12 arc lamps and 75 to 100 100 C. P. tungsten lamps; pole-line construction, including 110,000 feet No. 6 wire, transformers, pole-line materials of all kinds and description.

The sewerage system will consist of about two miles of 8, 10, 12 and 15" pipe, 15 man-holes, 7 flush tanks and one septic tank.

Bids will be considered as a whole, and also from manufacturers direct.

Certified check on local bank for 5 per cent. of the amount of the bid must accompany each bid, but no check for less than \$50 will be accepted.

The right is reserved to reject any and all bids. Plans and specifications may be seen at the office of the Consulting Engineer or the City Recorder after January 29. Specifications will be sent to prospective bidders upon receipt of \$5 sent to the office of the Consulting Engineer.

C. G. GATHINGS, Mayor.

R. C. HUSTON, Consulting Engineer,

1634 Exchange Building,

Memphis, Tenn.

Special Advertisements of General Interest.

J. T. KIMBROUGH WE LOCATE MANUFACTURERS REAL ESTATE

409-10 Atlanta National Bank Bldg.

ATLANTA, GA.

PUBLIC SALE OF THE REAL ESTATE of the Late EDWARD W. MEALEY HAGERSTOWN, MD. TUESDAY, JANUARY 30, 1912

The Hagerstown Trust Company, Executor of the last will and testament of Edward W. Mealey, deceased, will offer at public sale, in Hagerstown, Maryland, on TUESDAY, January 30, 1912, at one o'clock in the afternoon, THE FOLLOWING REAL ESTATE:

PARCEL NO. 1.—All that valuable lot of ground located at the intersection of Washington and Jonathan streets, in Hagerstown, Maryland, being adjoined on the west by the property of Mrs. Otho H. W. Hunter and fronting on Washington street about 82 feet and running back, more or less with uniform width, along and with Jonathan street, about 172½ feet to the Public Library.

The improvements thereon consist of—A TWO-STORY-AND-ATTIC STONE AND BRICK DWELLING, with gas, water and electricity, being the residence of the late Edward W. Mealey, situated on the southwest corner of Washington and Jonathan streets.

A ONE-STORY BRICK BUILDING, consisting of a row of three sets of offices with two rooms each, fronting on Washington street and adjoining, on the west, the dwelling-house.

A TWO-STORY BRICK BUILDING, consisting of a row of three sets of offices, with two rooms each, fronting on Jonathan street, with six office rooms on the second floor.

The location of this lot makes it an exceedingly valuable piece of real estate, as it is opposite the Courthouse, opposite the City Hotel, and diagonally across from Hotel Hamilton, and at the corner of two of the most traveled streets in the city, making it especially desirable for hotel, apartment-house, store or any business building.

TERMS OF SALE: One-third of the purchase money cash on the ratification of sale by the Orphans' Court of Washington County, Maryland; balance in two equal annual payments, with interest on deferred payments from day of sale, deferred payments to be secured to the satisfaction of the undersigned—or the purchaser can, at his option, pay the whole amount of purchase money in cash on the ratification of sale by the Court.

Upon payment of the entire amount of purchase money, with interest due thereon, a good and sufficient deed will be executed and delivered.

Possession of dwelling-house on day of ratification of sale by the Court, and of offices on April 1, 1912, with rent payable to purchaser from day of said ratification of sale.

HAGERSTOWN TRUST COMPANY,
Executor of the last will and testament of
Edward W. Mealey.
JACOB E. FISHER,
Auctioneer.

FACTORY SITES FARM LANDS Business Opportunities, Timber Lands, Realty Investments

We will take pleasure in submitting information pertaining to either of the above departments.

S. L. NUSBAUM & CO.
600 Citizens' Bank Bldg. Norfolk, Va.

Refrigerating Warehouse and Street Pipe Line for Sale

A modern Refrigerating Plant of upwards of three hundred and seventy thousand cubical capacity, including street pipe line system, covering produce and retail section, Kansas City, Mo. Liberal franchise; good physical condition; surplus of mechanical power; geographical location most advantageous; natural market of large and growing territory; business now tendered in excess of capacity; a splendid opportunity; offered at private sale on behalf of bondholders at considerably less than cost. Address

H. P. WRIGHT INVESTMENT CO.,
Kansas City, Mo.

Complete Saw Mill Plant, Dry Kiln and Logging Equipment FOR SALE

Mill has a daily capacity of 25,000 feet. Logging outfit consists of Locomotive, three and one-half miles of tramroad and six log trucks. Eighteen to twenty million feet of choice Pine timber, well blocked. Mill located about 35 miles south of Savannah, on the Seaboard Air Line Railway. Fifteen to twenty million feet additional timber can be had in easy reach of this plant. For full particulars address

ALBERT FENDIG & CO., Brunswick, Ga.

Voltage Regulator Wanted

for 100 K. W., 220 V. alternator,
with direct connected exciter.

Tremont Worsted Co., Methuen, Mass.

RECEIVERS' SALE RAILROAD CONTRACTORS EQUIPMENT

Steam Shovels, Locomotives, Cars, Hoists,
Derricks, Locomotive Cranes, Buckets, Etc.,

Totaling \$200,000.00

Write for full list and prices.

Address, RECEIVERS

909 New First National Bank Building, - COLUMBUS, OHIO

BRICK FACTORY BUILDING and FACTORY SITE FOR LEASE OR SALE ON EASY TERMS

Two-story brick factory building 200x60 feet, with ells, giving total floor space 30,000 sq. ft., with power, light, heat and water, automatic sprinkling system, 150 H. P. Corliss engine and two boilers. Site 385x200 feet, within corporate limits; abundant help nearby; accessible to electric cars, railroad and steamboat lines.

BARTON MYERS, NORFOLK, VA.

WOODWORKING PLANT FOR SALE

Entire plant of the Philadelphia Veneer & Lumber Co., Inc., consisting of land, buildings and machinery. Machinery consists of engines, boilers, pumps, heaters, band mill, short-log mill, veneer slicers, dryers, veneer saw, planers, etc., complete outfit for the making of cigar-box lumber and shooks.

Splendid location for a furniture, chair, mantel or woodworking plant. Right in the heart of the Appalachian forest region. Cheap lumber and labor. White help. Located on two trunk lines. For further particulars address

Philadelphia Veneer & Lumber Co., Inc., Knoxville, Tenn.

ROOFING SALESMAN WANTED

WANTED—A competent Roofing Salesman widely acquainted in Southern and Southwestern territories and thoroughly familiar with the sale of Asphalt Roofings and Coal Tar Products. Inexperienced applicants are not desired.

Address, "ASTAR"
Care of Manufacturers Record.

FURNITURE MANUFACTURING PLANT FOR SALE

Bargain; opportunity of a lifetime; furniture manufacturing plant; three-story brick; modern machinery; electric light; steam heat; cheap fuel; within 150 miles largest cities in United States; track connections with all railroads.

TRUSTEE, Box 37, Wilkes-Barre, Pa.

Fully Equipped Knitting Mill FOR SALE OR LEASE

Two-story substantially built brick building, with engine and boiler, situated in one of the fast growing cities of North Carolina, both rail and water shipping facilities, and good opportunity for right party. Address

BOX 308, Fayetteville, N. C.

BRICK PLANT IN CENTRAL FLORIDA FOR SALE

Now operating to full capacity. Inexhaustible clay deposit. Good-paying investment, but present owner has good reasons for wishing to sell. Address

"BRICK PLANT,"
Care Manufacturers Record.

COAL PROPERTY FOR SALE

Large tract land with valuable seam of coal under every acre. Mining engineers estimate 21,000,000 tons.

THEODOR G. LURMAN,
26 and 28 Commerce St., Baltimore, Md.

BANKRUPTCY SALE

Of the Real and Personal
Property of the Columbia
Cotton Oil and Provision
Corporation

The undersigned trustee will sell at public auction, upon the premises at Relee Postoffice, near Rosslyn, in Alexandria county, Virginia, on Wednesday, the 7th day of February, 1912, at 12 o'clock noon, free and clear of all liens, real and personal property of the above corporation. The plant of the above-named corporation consists of about 10 acres of real estate, with the building and improvements thereon, machinery and equipment used in the business.

Terms of Sale: One-third (1/3) of purchase money to be paid in cash, on confirmation of sale, and the balance in two equal instalments, payable in one and two years from date of confirmation of sale, and to be represented by the promissory notes of the purchaser, bearing interest at the rate of 6 per cent. per annum, payable semi-annually, and secured by a first deed of trust on the property sold, said deed to cover renewals of personal property sold, placed upon the premises during the life of trust; or all cash, at the option of the purchaser. Deposit of two and one-half (2½) per centum of purchase price shall be made on date of sale.

LEO P. HARLOW,

Trustee in Bankruptcy,

412 5th St. N. W., Washington, D. C.

119 S. Fairfax St., Alexandria, Va.

MYER COHEN,

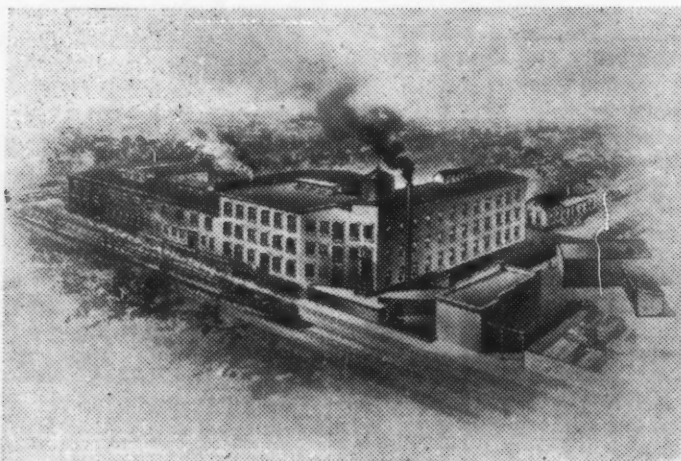
WALTER A. JOHNSTON,

LEVI H. DAVID,

E. W. STEARNS,

Counsel.

FOR SALE OR LEASE



Manufacturing plant or warehouse on Bellwood Avenue, Southern Railway and A. B. & A. R. R., containing two acres of land, with 600 feet railroad frontage, three-story brick mill constructed building, 42,000 square feet floor space; elevator, electric light plant, steam heat and modern plumbing. Has 100 H. P. engine and 125 H. P. boiler. Office building separate. Owner retiring on account of ill health.

H. M. BEUTELL, Owner - - ATLANTA, GA.

Wood Block Pavement



NEW YORK



CHICAGO

Wood Blocks in New York and Chicago

Ten years ago wood-block paving was almost unknown in America. To-day it is the recognized favorite for the central business thoroughfares of great cities throughout the country.

The above maps show what New York and Chicago are doing. The reasons for the success of wood-block are: Its quietness under traffic, an important thing to business men in offices; its cleanliness and its great durability, exceeding that of granite block or any other pavement ever known. It has been demonstrated by ten years of experience that these blocks are rot-proof, water-proof, and hence sanitary and clean. Many examinations of blocks which have been subjected to heavy traffic have been made, always resulting in demonstrating the fact that after the first year, during which the top surface is pounded down about one-eighth of an inch, wear on the block practically ceases, the surface having been hardened by traffic.

Mr. Wm. W. Marr, Assistant Chief Engineer of Streets, Board of Local Improvements, Chicago, writes in the *Engineering News*: "The creosoted wood-block pavement has been tried out under various condition in Chicago, and has given such general satisfaction that it seems now to be only a question of time when it will supercede granite block where noise is a factor, asphalt for the more highly traveled and better class of residence streets, and brick on the more progressive of the small business streets."

In New York City, wood-block pavements are giving equal satisfaction, especially in the office building district where the reduction of noise has brought about striking increase in office values. The people of New York would never countenance any proposal to reduce the present wood-block area and there is a constant demand for the extension of this type of pavement.

Booklet showing the wide use of creosote wood-block pavements will be sent free on request.

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DYNAMOS and MOTORS

Direct Connected Units
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Alternating Current Motors
Direct Current Motors
300 OF THEM

Thoroughly overhauled and fully guaranteed.

In stock for immediate delivery.

We Buy, Sell, Repair, Rent or Exchange.

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124 N. 3rd St., Philadelphia

LIGHTING DYNAMOS

40-light General Electric, speed 1350.
75-light Allis-Chalmers, speed 1300.
100-light Triumph, speed 1400.
150-light Westinghouse, speed 1200.
200-light Westinghouse, speed 875.
250-light Westinghouse, speed 825.
300-light General Electric, speed 900.
Condition Guaranteed.
110-volt. 250-volt. 500-volt.
A. C. and D. C. Motors and Generators in stock. Send for Bargain List.
MILLER-OWEN ELECTRIC CO.,
217-219 First Ave., Pittsburgh, Pa.

SECOND-HAND

Machine Tools

LATHES.

15x8 Lodge & Shipley, compound rest.
9"x14" Star, plain rest.
12"x5" Prentice Bros., R. & F.
15"x6" Flather, compound rest, P. C. F.
16x6 Prentice Bros., compound rest, P. C. F.
16x6 Reed, compound rest, taper and turret.
20x10 Prentiss, compound rest, P. C. F.
20x6 Fay & Scott, compound rest, P. C. F.
24x14 Reed, high speed.
27x12 Pratt & Whitney, C. R., P. C. F.
28x10 Putnam, C. R., P. C. F.
28x10 Gleason, compound rest, taper.
30x12 Pond, C. R., P. C. F.
32x17 Bement-Miles, C. R., triple geared.
36x16 Reed, compound rest, P. C. F.
40x18 Newark, triple geared, C. R., P. C. F.
46x28 Fitchburg, T. G., C. R., P. C. F.
102x35 Bement, compound rest, T. G.
21x14 Powell, compound rest, P. C. F.
26x13 Fitchburg, compound rest, P. C. F.
44x20 Fitchburg, C. R.

SCREW MACHINES.

2x24 Jones & Lamson, flat turret.
20x6 Bardner & Oliver, friction head.
No. 2 3/4" Warner & Swasey, wire feed.
No. 2 3/4" Garvin, wire feed, friction head.
No. 1 Garvin, wire feed.
3/4" National Acme, automatic.
1 1/4" Gridley, automatic.
No. 6 Brown & Sharpe, friction head.
1" Smurr & Kamen, wire feed.
1/2", 3/4", 1" and 2 1/4" Pratt & Whitney automatics.
No. 2 3/4" Pratt & Whitney, wire feed.
No. 1 7/16" Pratt & Whitney, wire feed.

MILLERS.

No. 15 Brainard, universal.
No. 4 1/2" Becker, plain.
No. 3 Cincinnati, universal.
No. 2 Brown & Sharpe, universal.
No. 2 Le Blonde, plain, back gears.

REBUILT ENGINES, BOILERS, PUMPS, Etc.

FULLY GUARANTEED

14"x36" L. H. Welsen & Vilter Corliss Engine.
14"x42" R. H. Frazer & Chalmers Engine.
42"x14" Horizontal Tubular Boiler, 110 lbs.
66"x16" Horizontal Tubular Boiler, 120 lbs.
72"x20" Horizontal Tubular Boiler, 160 lbs.
78"x20" Horizontal Tubular Boiler, 110 lbs.
90"x16" Internally Fired Marine Boiler, 95 lbs.
13 1/2"-8 1/2" 10 Worthington Duplex Pump.
14-5 1/2"-12 Canton-Hughes Duplex Pump.
No. 3 Style "B" Crusher.
14-ton Kelly-Springfield Road Roller.
50 H. P. Fairbanks-Morse Gasoline Engine.
30 H. P. Struther-Wells Gasoline Engine.
7x10 Double Cylinder Single Drum Lidgerwood Hoist, without boiler.
24x8 Putnam Lathe.
1000 to 8000-gal. capacity Storage Tanks.
We handle everything in the line of Machinery and Supplies. Write for our Special Bargain List No. 239.
CHICAGO HOUSE WRECKING CO.,
35th and 16th Streets, Chicago, Ill.

WATER TUBE BOILERS

Two 250 H. P. "Heine," complete, with all attachments, good for 140 lbs. pressure. Will make price low f. o. b. cars Philadelphia.

L. F. SEYFERT'S SONS, INC.,
437-39 N. Third Street, Philadelphia.

FOR SALE CHEAP

Four 100 H. P. Portable Return Flue Boilers. 12"x15" Erie City Engine.
12"x16" Birmingham Engine. 18"x22" H. S. & G. Engine. R. Hand Knife Grinder. 10" Outside Molder.

Tampa Machinery Exchange, Tampa, Fla.

Engines, Generator and Deep Well Steam Heads

FOR SALE. CHEAP.

1 9x8 Erie City Engine, direct connected to a 30 K. W. 125 V. D. C. Generator.
1 12x12 Erie City Engine.
1 10x36 Hill Deep-Well Steam Head.
1 6x36 Cook Deep Well Steam Head.
All the above in fine condition.
COGHLIN MACHINERY & SUPPLY CO.,
Toledo, Ohio.

Second-hand Electric Motors

We have the largest stock of second-hand electric motors and generators in America, and buy and sell, rent, exchange and repair electrical machinery of all kinds. Send for our "Monthly Bargain Sheet," showing complete stock with net prices. All machines guaranteed in good order.

GREGORY ELECTRIC CO.,
Sixteenth and Lincoln Sts., Chicago, Ill.

Engines, Boilers, Generators, etc.

1 22 and 40-36 Corliss Cross Compound.
2 24x48 Corliss Engines.
1 22 and 36-60 Tandem Corliss.
2 Phoenix Tandem 12 and 20x16 Engines.
1 Allis Corliss Tandem, 22 and 24x48 Engine. Engines direct connected to generators.
SEND for list and prices.
THE DORNER RAILWAY EQUIPMENT CO.,
1539 Irving Park Boulevard,
Chicago, Ill.

DYNAMOS AND MOTORS

I buy, sell, rent and exchange.
The best and the cheapest.
Let me know what you have for sale and what you want to buy.

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FOR SALE

One 20"x24"x13 1/2"x20" Norwalk Compressor. One 13"x12" Ball Engine. One 15"x14" Ball Engine. One 20"x48" Corliss Engine. One 13"x16" Center-Crank Slide-Valve Engine. One 12 1/2"x15" Hoisting Engine, double drums 64" diameter. One 7"x10" D. C. D. D. Hoisting Engine and Boiler. Three 5"x8" Double-Drum Hoisting Engines and Boilers. One 6 1/2"x10" Double-Drum Hoisting Engine and Boiler. One Deane 12 and 20"x10 1/2"x12" Duplex Piston Pattern Pump.
CHAS. T. LEHMAN, Birmingham, Ala.

Heater and Purifier

FOR SALE

One second-hand "BERRYMAN" HEATER AND PURIFIER in perfect condition and guaranteed good as new. Will sell cheap for cash. ADDRESS

M. F., care Manufacturers Record,
BALTIMORE, MD.

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MONEY EARNED

We can save you many a dollar on

Power Equipment

Let us give you details on any of the following items, which we have in stock in Philadelphia, ready for delivery.

CORLISS ENGINES

1 30"x60" "Fishkill," girder frame, R. H. \$2500
1 24"x50" "Watts-Campbell," girder frame, L. H. 1800
1 20"x48" "Harris," girder frame, L. H. 1450
1 18"x32" "Naylor," girder frame, R. H. 1550
1 16"x42" "Ohio," heavy duty, L. H. 1250
1 14"x36" "Frick," girder frame, R. H. 750
1 12"x24" "Whitehill," girder frame, R. H. 650
1 9"x24" "Cooper," girder frame, L. H. 500

AUTOMATIC ENGINES

1 27"x18" "Armington & Sims," C. C. 1250
1 16 1/2"x16" "Weston," C. C. 650
1 13"x12" "Erie Bail," C. C. 350
1 12"x14" "Atlas," C. C. 300
1 10"x12" "Atlas," C. C. 225
1 10"x10" "Westinghouse," 250

HORIZONTAL SLIDE VALVE ENGINES

1 16"x18" "Erie City," S. C. 500
1 15"x16" "Nagle," C. C. 400
1 10"x12" "Nagle," C. C. 150
1 10"x10" "Metropolitan," S. C. 150
1 8 1/2"x11" "Farquhar," Ajax, C. C. 140

BOILERS

1 250 H. P. "Heine," water tube. 1250
3 72"x18" "Penna. Boiler Works," return tubular, each. 500
2 72"x18" "C. & G. Cooper," return tubular, each. 500
1 40 H. P. "Erie City," economic type. 250

We also have a large and well-selected stock of iron and woodworking machinery, electrical equipment and contractors' outfits. Send for latest price-list.

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SPIRAL PIPE

FOR SALE CHEAP

9000 feet Galvanized Spiral Riveted Flanged Pipe, size 9". Heavy gauge, in first-class serviceable condition, suitable for dredge work, air pressure, etc. Will make very attractive price in quantities.

MARINE METAL & SUPPLY CO.

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NEW YORK CITY.

Generators Engines Machine Tools Pipe

H. KLEINHANS

Oliver Building Pittsburgh, Pa.

In revising our manufacturing equipment, we find the following first-class

Used Machine Tools

which we offer at attractive prices

ENGINE LATHES

14 in. x 6 ft. Flather, Q. C. G.
16 in. x 6 ft. Hendey, Q. C. G.
16 in. x 6 ft. Pratt & Whitney, Q. C. G.
16 in. x 8 ft. Reed.
18 in. x 6 ft. Lodge & Shipley, Q. C. G.
18 in. x 8 ft. Lodge & Shipley, Q. C. G.
18 in. x 10 ft. Lodge & Shipley, Q. C. G.
20 in. x 8 ft. Lodge & Shipley, Q. C. G.
20 in. x 10 ft. Lodge & Shipley, Q. C. G.
22 in. x 14 ft. Lodge & Shipley, Q. C. G.
24 in. x 8 ft. Lodge & Shipley, Q. C. G.
24 in. x 10 ft. Lodge & Shipley, Q. C. G.
27 in. x 10 ft. Lodge & Shipley, Q. C. G.
36 in. x 12 ft. Lodge & Shipley, Q. C. G.
36 in. x 14 ft. New Haven.

SPECIAL LATHES

24 in. x 7 ft. Lodge & Shipley Chucking Lathe.
No. 3 Lodge & Shipley Rapid Reduction Lathe.

PLANERS

36 in. x 36 in. x 10 ft. Sellers.

METAL SAWS

No. 3 Nutter-Barnes Cold Saw.
Franklin Cold Saw, 3 1/2 in. capacity.
Globe Power Hack Saw, 3 in. capacity.
Universal Power Hack Saw, 6 in. capacity.

MISCELLANEOUS MACHINES

Whitton Centering Machine.
Mumford 12 in. x 40 in. Molding Machine.
Write for complete description with price of machines in which you are interested.

THE LODGE & SHIPLEY MACHINE TOOL CO.
CINCINNATI, OHIO

FOR SALE

One (1) Sturtevant Single Exhaust Fan with direct-connected Vertical Steam Engine, suction 36" dia., upward outlet 30" dia.
One (1) Clayton Air Compressor, 6"x10"x2", steam driven.
One (1) Hydraulic Press, plates 14" wide, 36" long, ram 12" diameter, 12" stroke, pump 5"x7" stroke.

CHAS. ROSS & SON CO.

148-156 Classon Ave., Brooklyn, N. Y.

ONE CLOSED HEATER

FOR SALE

155 H. P. National Pipe Mfg. Co. make. In good order.

STONE MOUNTAIN GRANITE CORPORATION
STONE MOUNTAIN, GA.

AIR COMPRESSOR

FOR SALE.

One Sullivan Straight-Line Steam-Driven Air Compressor, cap. 174 cu. ft. free air per min., complete, with speed and pressure governor, in A-1 condition, at a bargain.

BYRD BROTHERS, Salisbury, N. C.

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Don't fail to buy from advertisers in the MANUFACTURERS RECORD as they are the most representative firms seeking Southern business.

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149 BROADWAY

NEW YORK
N. Y.

1876

1912

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EXPERIENCE
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Second-Hand Machinery

Guarantees good judgment in the selection of our large and well assorted stock of Machine Tools, Woodworking Machines, Boilers, Engines, Motors, Dynamos, Direct Connected Sets, Air Compressors, Hoisting Engines, etc.

Having purchased and dismantled several large manufacturing plants such as:

The Bonneville Portland Cement Co., Siegfried, Penna.

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Mora Automobile Co., Newark, New York.

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2 2x14 Baldwin Saddle-Tank Locomotives, 36" gauge, built 1903, rebuilt 1912, at Pittsburgh, Pa.

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1 10x16 Vulcan Saddle-Tank Locomotive, standard gauge, rebuilt 1911 at Wilkes-Barre, Pa.

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100 4-yard 36" gauge Kerbaugh-Allison Dump Cars, rebuilt at Pittsburgh, Pa.

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4 10"x16" 60% gauge Locomotives (will change gauge to suit).
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Address at once
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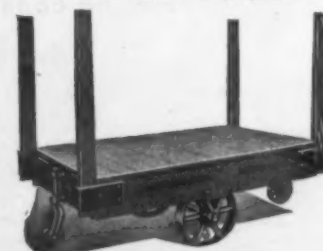
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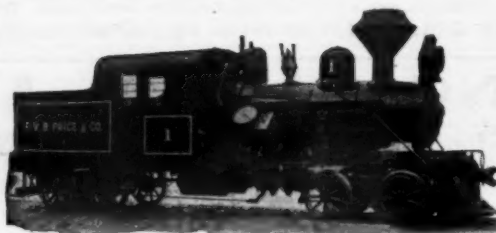
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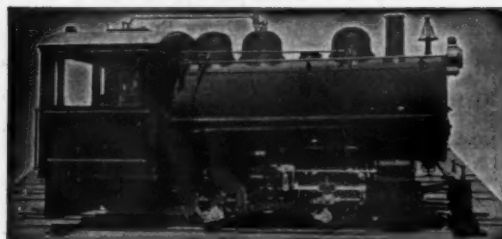
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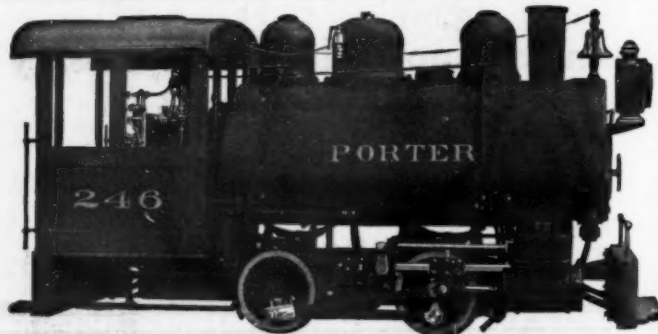
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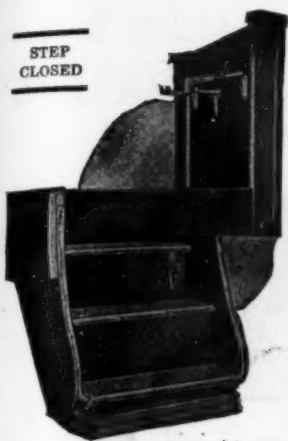
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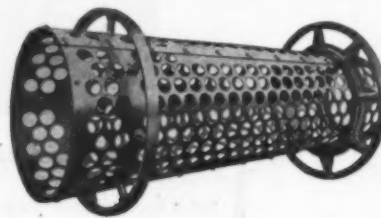
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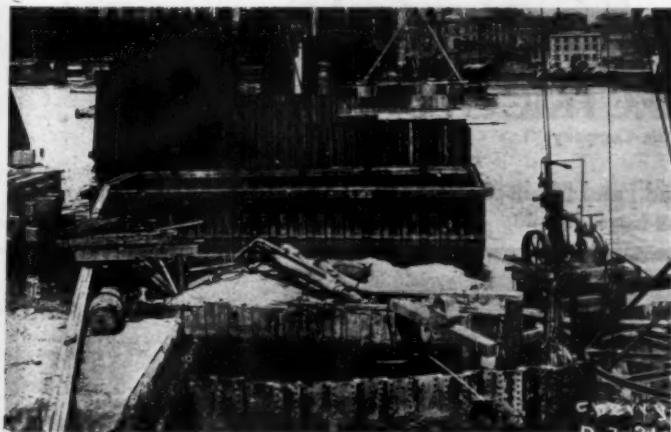
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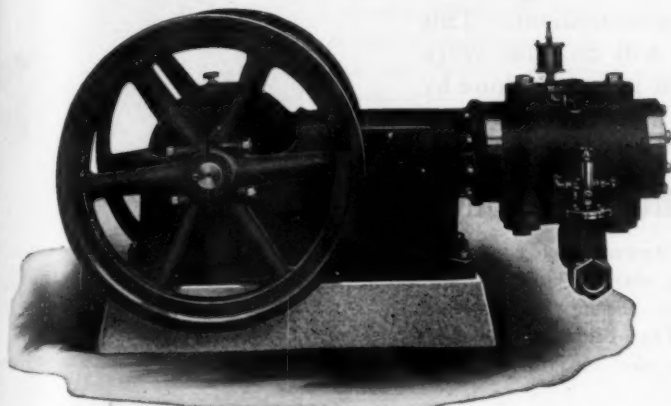
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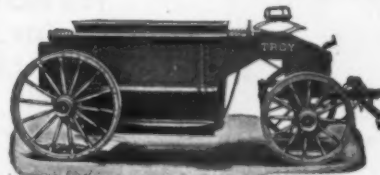
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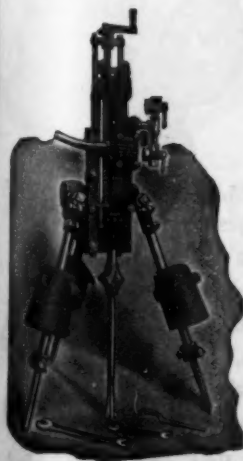
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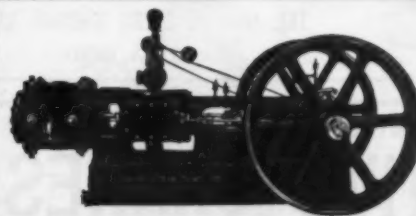
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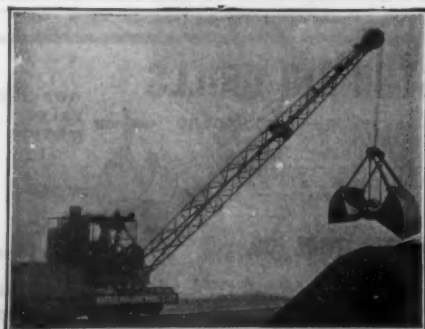
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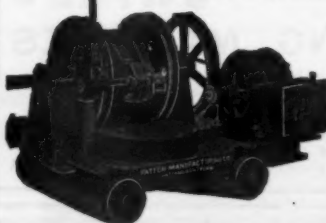
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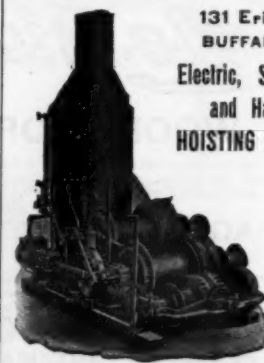
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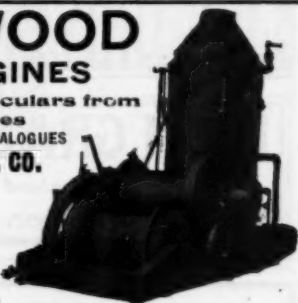
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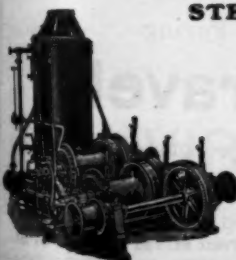
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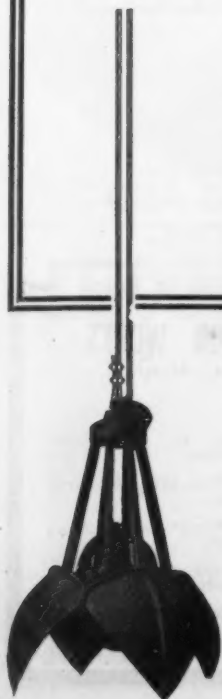
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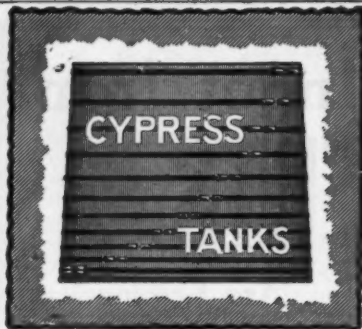
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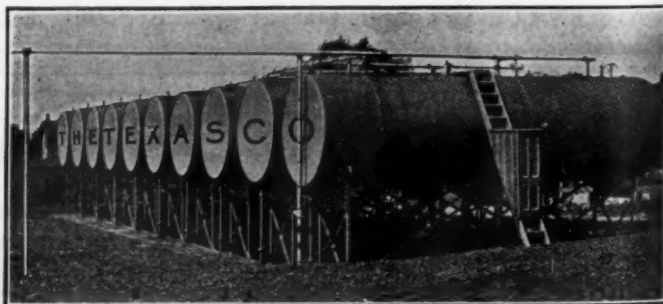
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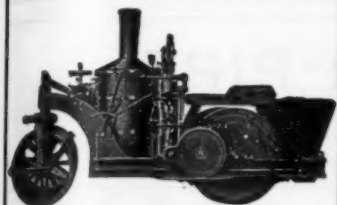
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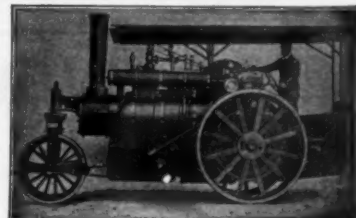
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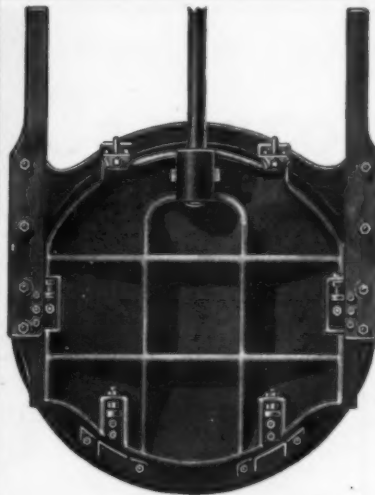
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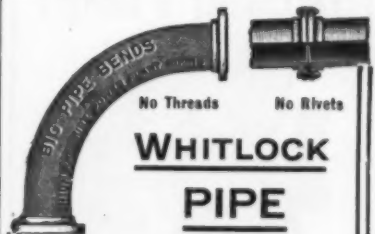
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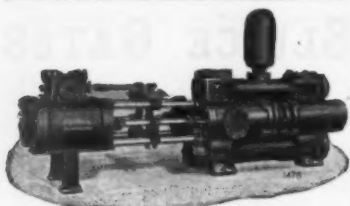
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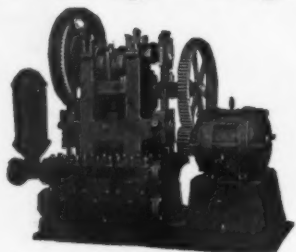
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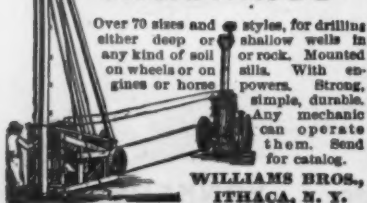
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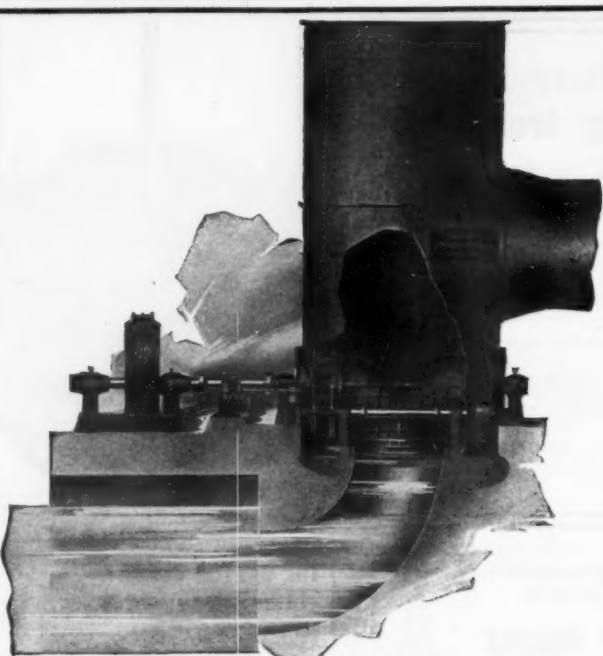
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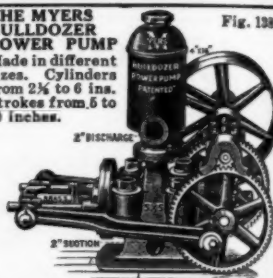
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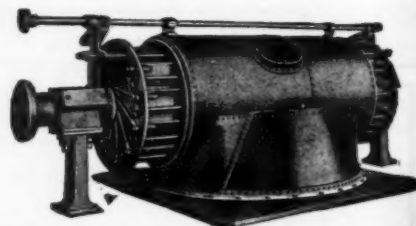
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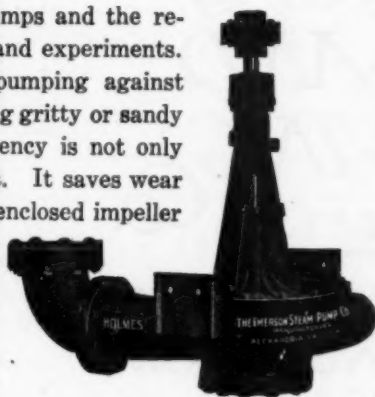
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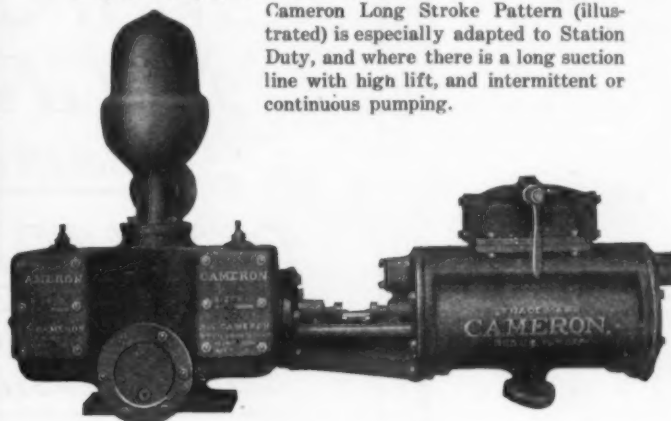
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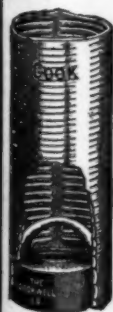
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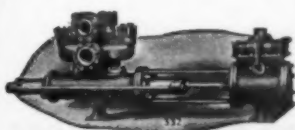
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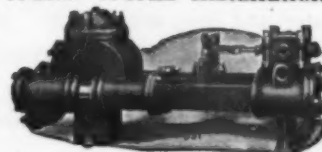
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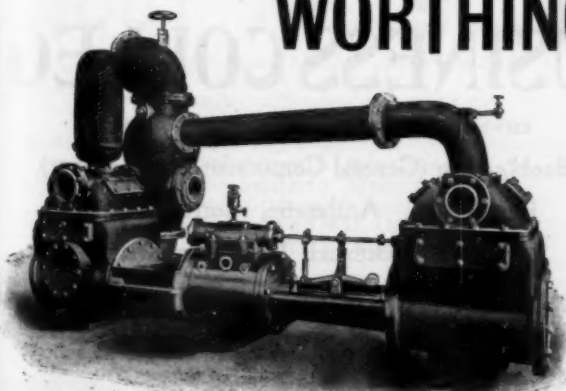
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Lands are reasonable in price, very fertile and adaptable to the widest range of crops. Splendid climate and excellent church and school advantages. The territory is attracting general attention throughout the country.

Those desiring to locate will do well to communicate early. Inquiries are invited and literature treating fully with the population, soil conditions, etc., will be promptly mailed.

W. H. LEAHY

GENERAL PASSENGER AGENT

ATLANTA, GA.

Attractive Factory Sites

ON THE

ILLINOIS CENTRAL RAILROAD

For full particulars address the undersigned

Free books of information on farm lands issued by the
Illinois Central Railroad

ABOUT THE SOUTH

LOUISIANA RECLAIMED LANDS MAKE
FERTILE FARMS
THE YAZOO MISSISSIPPI VALLEY
LIVE STOCK INDUSTRY IN THE SOUTH
ALFALFA SUCCESSFULLY GROWN IN MISSISSIPPI
MADISON COUNTY, MISSISSIPPI
GRENADA COUNTY, MISSISSIPPI
TISHOMINGO COUNTY, MISSISSIPPI
TANGIPAHOA PARISH, LOUISIANA
WEST TENNESSEE

Everyone who would like a Southern home or investment should have a copy of one or all of these books. For free copies address

J. C. CLAIR

Industrial and Immigration Commissioner

ILLINOIS CENTRAL RAILROAD COMPANY

135 Park Row, CHICAGO, ILL.

Every Variety of Timber in "A Land of Resources"

The Tennessee Central Railroad traverses the great Timber belts of Tennessee, in which is grown every variety of Wood known in the South. There are vast tracts of virgin forest available for every conceivable woodworking plant or factory. This is the home of the fine Oaks, Poplar, Lynn, Ash, Hickory, Walnut, Cherry, Cedar, Chestnut, Buckeye, Beech and Elm.

No territory could offer more advantageous locations for a

PAPER PULP MILL AND TANNIC EXTRACT PLANT

Let me demonstrate this to you. Address

RUTLEDGE SMITH, Industrial Agent

TENNESSEE CENTRAL RAILROAD

Cookeville, Tennessee

CLAYS IN THE SOUTH

The U. S. Government report shows that the value of brick and tile manufactured from clay in Pennsylvania for 1909 exceeded twenty million dollars.

We can show limitless deposits of superior clay in easy reach of reasonable priced electric power, where transportation facilities offer a very wide distribution.

An ideal location for a large plant. For particulars address

J. A. PRIDE

General Industrial Agent Seaboard Air Line Railway

NORFOLK, VIRGINIA

MANUFACTORIES INVITED

Cheap Electric Power and Labor

Bedford City, Va., offers every advantage to industrial plants generally. Has cheap electric power which is very necessary to profitable manufacturing; has good supply of labor and ample raw material of various kinds within easy reach; and is on railroad connecting with all parts of the country and seaports. Good schools, churches, healthful climate and other facilities and comforts which make it a fine place of residence.

Detailed information gladly given by the

BOARD OF TRADE

BEDFORD CITY, VIRGINIA

THE West Point ROUTE

Atlanta & West Point R. R.

THE WESTERN
RAILWAY OF ALABAMA

Offers excellent locations for

Truck, Fruit, Stock

And General Farming

Available Factory Sites. Abundance of Raw Material and Good Transportation Facilities.

Write for information.

R. E. LUTZ

General Agent

MONTGOMERY, ALABAMA

The Thriving Towns of Georgia

Offer opportunities and untold advantages for every line of business. Situated in the heart of the great COTTON BELT, in a country that is growing by leaps and bounds, and knows no hard times, they offer splendid inducements to merchants, manufacturers, professional men and every man that is willing to work. Correspondence solicited.

Georgia Bureau of Industries
& Immigration

714 Century Bldg.

Atlanta, Ga.

Establish YOUR Business at the Base of Supplies

In Montgomery, Chattanooga, Rome, Atlanta, Macon, Columbus, Birmingham and a number of other cities and towns along the Central of Georgia Railway are factory sites which are ideal from every standpoint.

Your Iron, Coal, Coke, Timber and other raw materials are procurable at the lowest cost and in any quantities you need, as you need them, from immense supplies under your hand on every side. Efficient labor is plentiful, and water power abundant and inexpensive.

The prosperous, loyal community round about supplies a home market of great possibilities. Excellent shipping facilities open the whole country for promotion of sales on a successful competitive basis.

The progress that this district has made along industrial, commercial and agricultural lines during the past few years is but an indication of the prosperity that will mark its future. In it is the rational location for your factory. Any information you desire will be sent gladly and promptly upon request.

Address J. M. MALLORY
Savannah, Georgia

INDUSTRIAL AGENT

CENTRAL OF GEORGIA RAILWAY

VIRGINIA
KENTUCKY
TENNESSEE

GEORGIA
No. CAROLINA
So. CAROLINA

To Manufacturers:

Substantial manufacturing concerns, especially those engaged in turning out steel, iron or wood products, requiring new sites and additional capital, will find it to their advantage to communicate with the undersigned.

An important city on the Southern Railway wants more factories, and offers inducements well worthy the consideration of any manufacturing company seeking a new location where there is abundant room, cheap coal, large timber supply, desirable labor, excellent point for distribution of product, and a charming residential place.

We welcome the opportunity to afford further information to responsible concerns. All correspondence and negotiations confidential. Refer to File 11,686. Write or call on

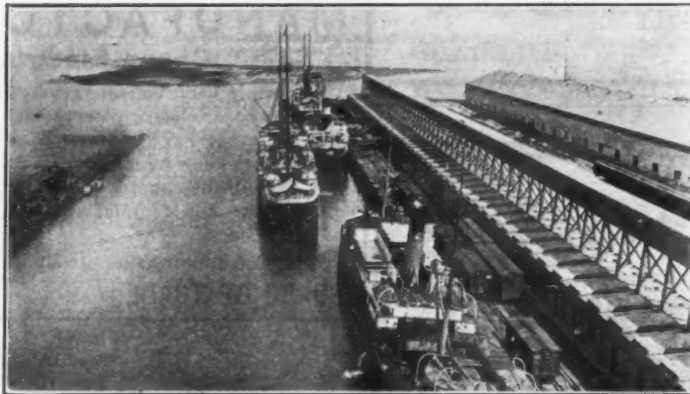
M. V. RICHARDS, Land and Industrial Agent
Southern Ry., Room 52, WASHINGTON, D. C.

FLORIDA
ALABAMA
MISSISSIPPI

SOUTHERN Ry.
Mobile & Ohio
GA. So. & FLA.

Texas City's Modern Docks

It is conceded, that with the opening of the Panama Canal, a port must be developed somewhere along the Gulf Coast of Texas, as an outlet for the tremendous commerce of the vast territory lying in the South and Central West, and extending far into the Dominion of Canada. The promoters of the Texas City Ocean Terminal project have anticipated such a necessity and are providing for it.



When it is considered that the volume of business for the port of Texas City has more than doubled every year since the first year it was opened to commerce, it is conceivable that its promoters were justified in their belief that here is the logical location for an entrepot for the commerce of the world.

"Where Rail and Water Commerce Meet"

The Manufacturers' Mecca Texas City, Texas

THE advantages for manufacturers, as an investigation will readily disclose, are nowhere better than at Texas City, Texas. First, no matter what the article you manufacture, the raw material may be found at Texas City or its immediate vicinity, and the means afforded for cheap and convenient transportation for both the raw material and the finished product. Second, by reason of its location and its excellent rail and water transportation facilities (now recognized as the most modern in the entire South), the manufacturer is placed in direct communication with the markets of the world; and third, a non-competitive field in a zone where the people are progressive and will extend every encouragement consistent with reason. Don't you think you ought to investigate this further?

For Full Information Address

Texas City Transportation Co.

Texas City, Texas

Excellent Reasons for the Success of Crate, Box and Barrel Plants in Florida

In a recent advertisement on this page it was suggested that veneer package and barrel plants could be located in Florida with every assurance of certain success.

Facts were given that bear out the assertion that among the opportunities for profitable manufacture that are offered by the East Coast of this State, those for turning out boxes, barrels, crates and other veneer packages for the shipment of various products are especially inviting because of the immediate returns at good profit which they promise.

It is well known how remarkably the growing of fruits and vegetables in Florida for Northern markets is increasing and expanding year by year.

As an indication of this growth it is interesting to note that from one station last year there were shipped 2,500,000 crates of vegetables and 2,000,000 boxes of fruit, while from another point were sent out 300,000 barrels of potatoes.

Think what these figures indicate—that at these two points alone more than 4,500,000 boxes and crates and over 300,000 barrels will doubtless be needed during the present year.

Multiply these figures by ten and you will not then have the total that will be required for carrying the entire output of fruits and vegetables from the East Coast of Florida for the coming year.

There are some box, crate and barrel factories at several points along this railroad, but they are not able to supply the present and steadily growing demand, and their output must be supplemented by that of plants outside of the State until such time as local opportunities are utilized to meet local demands.

The timber used for these products in Florida is the native pine that grows in profusion all along the East Coast.

Much of this can be secured at a very low figure from those who are clearing their lands for farming, thus this territory is furnishing both the demand for the product and the raw material for supplying it.

Florida East Coast Railway

J. E. INGRAHAM, Vice-President

ST. AUGUSTINE, FLA.

Abundance of Cheap Power

Along the Clinchfield Route

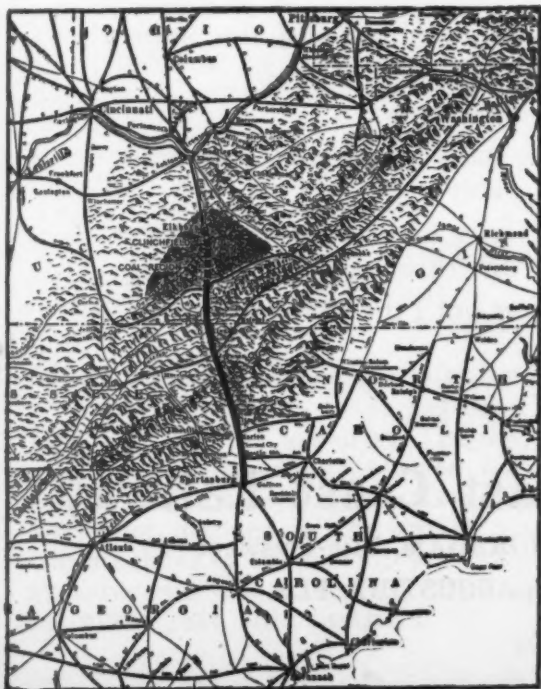
Whether your plant is driven by steam or electricity the Clinchfield can offer you sites where power can be developed at the lowest possible cost.

Throughout that section of the Appalachian South traversed by the Clinchfield are rivers which offer splendid opportunities for hydro-electric developments ranging from 250 H. P. up.

Many of these sites have been especially examined by a hydraulic engineer and reports and maps have been prepared to cover the character of each site, the amount of horse-power available and the approximate cost of construction.

In addition, the enormous coal fields of the Clinchfield Coal Corporation are situated at the north end of the Clinchfield Route, thereby insuring a plentiful supply of high-grade coal at comparatively low cost. Consequently, a manufacturer locating on the Clinchfield Route can obtain an abundance of power at low cost—a most important factor in industrial operations.

To cheap power add the availability of such important raw materials as cotton, hardwoods, various mineral deposits, the products of farm and orchard, abundance of white labor, a most healthful climate and large consuming markets within easy reach, and where can be found more ideal conditions for economical and profitable manufacture?



Detailed information regarding industrial locations will be gladly furnished. Send for our booklet, "The Land of Opportunities," which outlines the resources of the remarkable country along the Clinchfield Route.

Carolina, Clinchfield & Ohio Rwy.

"THE ROAD OF OPPORTUNITY"

J. J. Campion,
V.-P. and Traffic Manager

R. F. Brewer,
Industrial Agent

Johnson City, Tenn.

West Virginia's Ideal Industrial Locations

Capital and industry are ever on the outlook for those locations which provide ideal conditions for economical and profitable manufacture.

Consequently in establishing plants, careful and expert investigation is made so that the place selected shall possess as far as possible, the most desirable requirements as to assembling raw materials, supply of labor, cost of power, and nearness to and facilities for reaching consuming markets.

In preceding advertisements dealing with the State's more important natural resources outside of coal, timber, such as limestones, clays, iron ores, glass sands, and natural gas, we have shown that

West Virginia Possesses Ideal Industrial Locations.

An expert investigation of the facts presented in these advertisements will bear out every statement that has been made. Indeed they will show that the claims were by far too conservative.

West Virginia is not only located in the heart of our greatest industrial activities, but the Baltimore & Ohio, which covers the larger part of it and passes through those sections containing the raw materials enumerated, offers shipping facilities that are unsurpassed for reaching the great consuming areas, east, west, north, and, through the Atlantic seaports, the markets of the world.

Capitalists, investors and manufacturers will find it to their advantage to investigate the opportunities available in West Virginia, and in doing so, the Baltimore and Ohio, through its Industrial Department, will furnish complete information and co-operate with them to the fullest extent.

Baltimore & Ohio Railroad

W. W. Wood, Industrial Agent

Baltimore, Md.

Clays of Mississippi

Mississippi has extensive deposits of different varieties of high-grade clays that are especially suited for the manufacture of brick, pottery and tile.

None of these deposits, however, have been developed in keeping with their importance, and while some plants have been established in the State to manufacture various clay products, these have not been able to keep pace with the demand, and there is room for many more.

Realizing the value of its clay deposits the State has had special and careful investigations made by its Geological Survey.

The result of this work has been published in several volumes with a hope that a better knowledge of Mississippi's clay deposits would lead to a broader development of them.

In speaking of the possibilities of the pottery industry one of these reports states:

"The ceramic history of Mississippi has not been developed to that extent which is warranted by the quality and quantity of its resources. During the past few years there has been a decided improvement in our methods of brick manufacture with a corresponding increase in the quality of the ware. The manufacture of drain tile has been introduced, and the fact that we have clays suitable for its manufacture has been thoroughly demonstrated. In the manufacture of pottery, however, there has been little advance."

As the entire State is undergoing a rapid industrial and agricultural development and many new home-seekers are continually locating here, a great amount of new building and construction work of all kinds is continually being undertaken, and large quantities of brick and drain tile are being used.

Most of these materials are shipped from the outside, when all and more than is needed could be made within the State.

Mississippi offers not only a splendid and growing home market, but also an abundance of the raw materials for the establishment of a number of modern well-conducted clay working plants.

Considering the need for clay working plants in this State, these opportunities are worthy of careful investigation.

*Further facts
regarding
Mississippi
Clay Deposits
will be gladly
furnished.*

Illinois Central Railroad

Chicago, Ill.

*J. C. Clair,
Industrial
and
Immigration
Commissioner,
Chicago, Ill.*

Abundance of Raw Materials

For

Wood Working Plants in Tidewater Virginia

Enormous sources of supplies of lumber, both hard and soft woods, are available for wood working plants located in that part of Tidewater Virginia which includes the cities of Richmond, Norfolk, Petersburg, Portsmouth and Suffolk.

Hundreds of millions of feet of lumber from North Carolina, Virginia and West Virginia are brought to this section every year both for manufacture and shipment to other parts of this country and abroad.

Additional large quantities of timber have also become available in recent years through the completion of the Virginian Railway, extending across Virginia into West Virginia, and the extension of the Norfolk Southern Railroad into new sections of North Carolina.

Every one of the seven trunk lines, with an aggregate mileage of 20,000, which have their termini in Tidewater Virginia, contributes its share to the vast quantity of timber that is brought here annually.

These extensive railway systems, as well as the water transportation lines available, offer unequaled facilities for distributing finished products to the best markets in the land.

All of which strongly emphasizes the fact that there are immense possibilities in this territory for the establishment and profitable operation of all kinds of wood working plants.

In addition to a vast supply of raw materials and unsurpassed transportation facilities, cheap power, efficient labor and a splendid climate all combine to offer facilities for wood working plants that are not excelled by any other locality in America.

Operating the electric light, power and railway utilities of Richmond, Norfolk, Petersburg, Portsmouth and Suffolk, the active industrial centers of Tidewater Virginia and furnishing a service that is complete and modern in every sense of the word the Virginia Railway & Power Company is deeply interested in the fullest development of this territory and will gladly co-operate with those seeking further information regarding specific openings for various wood working industries.

Virginia Railway and Power Company

RICHMOND

NORFOLK

PETERSBURG

PORTSMOUTH

SUFFOLK

VIRGINIA

- Abrasive Materials.**
Abrasive Material Co., Philadelphia, Pa.
Carborundum Co., Niagara Falls, N. Y.
Norton Co., Worcester, Mass.
Vitrified Wheel Co., Westfield, Mass.
- Accountants.**
Baltimore Audit Co., Baltimore, Md.
Cruselle Audit Co., Atlanta, Ga.
Interstate Audit Co., Washington, D. C.
Neville, Chas., Savannah, Ga.
- Adding Machines.**
Adder Machine Co., Wilkes-Barre, Pa.
Burroughs Adding Machine Co., Detroit, Mich.
- Agents. (Manufacturers.)**
Allen, Herbert F. L., Washington, D. C.
- Agricultural Implements.**
Appomattox Iron Wks. & Sup. Co., Petersburg, Va.
Myers & Bro., F. E., Ashland, O.
- Air Compressors. (Stationary and Portable.)**
Allen, Herbert F. L., Washington, D. C.
American Air Compressor Wks., New York, N. Y.
American Compressor & Pump Co., Baltimore, Md.
Bladell Machinery Co., Bradford, Pa.
Chicago Pneumatic Tool Co., Chicago, Ill.
Gardner Governor Co., Quincy, Ill.
General Electric Co., Schenectady, N. Y.
Ingersoll-Rand Co., New York, N. Y.
Union Steam Pump Co., Battle Creek, Mich.
- Air Motors.**
Ingersoll-Rand Co., New York, N. Y.
- Aluminum Products. (Bars, Sheets, Tubes, etc.)**
Aluminum Company of America, Pittsburgh, Pa.
- Aluminum Wheels.**
Morton Company, Worcester, Mass.
- Anti-Friction Metals.**
Bailey-Leiby Co., Charleston, S. C.
Dodge Manufacturing Co., Mishawaka, Ind.
Gilbert & Sons Brass Fdry. Co., A., St. Louis, Mo.
Phosphor-Bronze Smelting Co., Phila., Pa.
Virginia Railway Supply Co., Norfolk, Va.
- Architects.**
Anderson, Cain & Shepherd, Richmond, Va.
Cuthren & Cuthren, Greenwood, S. C.
Lockwood, Greene & Co., Boston, Mass.
McLaughlin & Johnson, Lynchburg, Va.
Milburn, Helster & Co., Washington, D. C.
Nichols, Charles H., New York, N. Y.
Northrup, Willard C., Winston-Salem, N. C.
Pettit & Cave, Danville, Va.
Shand & Lafay, Columbia, S. C.
Sirtine, J. E., Greenville, S. C.
- Architects' Supplies.**
Keuffel & Esser, Hoboken, N. J.
Starrett Co., L. S., Athol, Mass.
Weber & Co., F., Philadelphia, Pa.
- Architectural Iron and Sheet Metal Work.**
Bolles Iron & Wire Works, E., Detroit, Mich.
Chesapeake Iron Works, Baltimore, Md.
Des Moines Bridge & Iron Co., Des Moines, Ia.
Schreiber & Sons Co., The L., Cincinnati, O.
Snead Architectural Iron Works, Louisville, Ky.
- Art Glass.**
Blaswanger & Co., Memphis, Tenn.
- Art Glass and Prisms. (Set in Zinc and Copper.)**
Epless Art Glass Co., G. A., St. Louis, Mo.
- Asbestos.**
Carolina Portland Cement Co., Charleston, S. C.
John-Manville Co., W., New York, N. Y.
Southern Pipe Covering Co., Inc., Richmond, Va.
- Asphalt.**
Armstrong Mfg. Co., Richmond, Va.
Barber Asphalt Paving Co., Philadelphia, Pa.
Gulf Refining Co., Pittsburgh, Pa.
Texas Co., The, New York, N. Y.
- Asphalt Melters.**
Stuebner, Iron Works, G. L., Long Island City, New York, N. Y.
- Asphalt Roofing and Siding. (Bird Sand and Chipped Slate Surfaced.)**
Birmingham & Seaman Co., Chicago, Ill.
- Automobiles. (Pleasure.)**
Interstate Automobile Co., Muncie, Ind.
- Axles. (See Car Wheels, Axles and Trucks.)**
- Babbitt Metal. (See Anti-Friction Metal.)**
- Badges. (Hat and Breast, Electric and Steam Road, Police and Fire Dept.)**
American Railway Supply Co., New York, N. Y.
- Bakers' Machinery.**
Lynn Superior Co., The, Cincinnati, O.
- Bankers and Brokers.**
Baltimore Trust Co., Baltimore, Md.
Barr, J. H. C., Philadelphia, Pa.
Delaware Trust Co., Wilmington, Del.
Electric Bond & Share Co., New York, N. Y.
Glenn, W. S., Spartanburg, S. C.
Guaranty State Bank & Trust Co., Dallas, Tex.
Halsey & Co., N. Y., New York, N. Y.
Lisman & Co., F. J., New York, N. Y.
Mercantile Trust & Deposit Co., Baltimore, Md.
New First National Bank, Columbus, O.
New York Bond & Share Co., New York, N. Y.
Nuven & Co., John, Chicago, Ill.
Savannah Bank & Trust Co., Savannah, Ga.
Southern States Development Co., New York, N. Y.
Violet & Co., Atwood, New York, N. Y.
- Banks.**
First National Bank, Baltimore, Md.
First Nat'l Bank of Key West, Key West, Fla.
First National Bank, Richmond, Va.
Guaranty State Bank & Trust Co., Dallas, Tex.
Merchants National Bank, Baltimore, Md.
New First National Bank, Columbus, O.
National Exchange Bank, Baltimore, Md.
Savannah Bank & Trust Co., Savannah, Ga.
- Bank and Office Railings and Grilles. (Iron.)**
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Buckeye Wire & Iron Works, Columbus, O.
Chattanooga Iron & Wire Wks., Chattanooga, Tenn.
Chesapeake Iron Works, Baltimore, Md.
Cincinnati Mfg. Co., Cincinnati, O.
Dow Wire Works, Louisville, Ky.
Dufur & Co., Baltimore, Md.
Dufur, Baggett & Co., Baltimore, Md.
Meyers Mfg. Co., F. J., Hamilton, O.
Ohio Elevator & Machine Co., The, Columbus, O.
- Bank Fixtures.**
Ruse & Thompson, Baltimore, Md.
- Bar Benders. (For Bending Reinforcing Bars.)**
Hinman & Co., D. A., Sandwich, Ill.
- Bar Iron. (Refined and Galvanized.)**
Carnegie Steel Co., Pittsburgh, Pa.
Nietown Plate Washer Co., Philadelphia, Pa.
- Bars, Wire, Wire Fabric, etc. (Steel for Concrete Steel Construction.)**
American Steel & Wire Co., Chicago, Ill.
Cincinnati Iron & Steel Co., Cincinnati, O.
Concrete-Steel Co., The, New York, N. Y.
Concrete Steel Engineering Co., New York, N. Y.
Franklin Steel Co., Franklin, Pa.
Hoffman & Co., R. O., Baltimore, Md.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Wright & Co., W. N., New York, N. Y.
- Bearings. (Ball.)**
Brets Co., J. S., New York, N. Y.
Hyatt Roller Bearing Co., Newark, N. J.
Standard Roller Bearing Co., Philadelphia, Pa.
- Bearings. (Brass Journal.)**
Gilbert & Sons Brass Fdry. Co., A., St. Louis, Mo.
- Bearings. (Locomotive and Car.)**
Keystone Bronze Co., Pittsburgh, Pa.
- Bearings. (Oilless.)**
North Amer. Metaline Co., Long Island City, N. Y.
- Bearings. (Roller.)**
Hyatt Roller Bearing Co., Newark, N. J.
Standard Roller Bearing Co., Philadelphia, Pa.
- Bells. (Call.)**
Holtzer-Cabot Electric Co., Boston, Mass.
- Bells and Gongs.**
National Tube Co., Pittsburgh, Pa.
Western Electric Co., New York, N. Y.
- Belting. (Leather, Canvas, Rubber.)**
American Supply Co., Providence, R. I.
Bailey-Leiby Co., Charleston, S. C.
Baltimore Belting Co., Baltimore, Md.
Cameron & Barkley Co., Charleston, S. C.
Chesapeake Belting Co., Baltimore, Md.
Diamond Rubber Co., Akron, O.
Druid Oak Belting Co., Inc., Baltimore, Md.
Gandy Belting Co., Baltimore, Md.
Ladew, Estate Edward, Glen Cove, N. Y.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Rossendale-Reddaway R. & H. Co., Newark, N. J.
Ward-Beeke Co., Washington, D. C.
Williams & Sons, L. B., Dover, N. H.
- Belting. (Chain.)**
Bartlett & Snow Co., U. O., Cleveland, O.
Caldwell & Sons Co., H. W., Chicago, Ill.
Jeffrey Mfg. Co., Columbus, O.
Link-Belt Co., Nictown (Philadelphia), Pa.
Morse Chain Co., Ithaca, N. Y.
- Belt Conveyors.**
Jeffrey Mfg. Co., Columbus, O.
Robins Conveying Belt Co., New York, N. Y.
- Belt Dressing.**
Diamond Rubber Co., Akron, O.
Gandy Belting Co., Baltimore, Md.
Ladew, Estate Edward, Glen Cove, N. Y.
- Belt Fasteners.**
Crescent Belt Fastener Co., New York, N. Y.
- Belt Lacing. (See Belting, Leather, Canvas, Rubber, and Supplies.)**
- Bicarbonate Soda. (Sap Stain Lumber Dip.)**
Church & Dwight Co., New York, N. Y.
- Billets. (Open Hearth.)**
Erie Forge Co., Erie, Pa.
- Blackboards. (Slate.)**
East Bangor Co., Slate Co., The, East Bangor, Pa.
Hower, J. K., Slatington, Pa.
Johnson, E. J., New York, N. Y.
- Block Tackle. (For Wire or Manila Rope.)**
Patterson Co., W. W., Pittsburgh, Pa.
- Blowers and Exhaust Fans.**
American Blower Co., Detroit, Mich.
Buffalo Forge Co., Buffalo, N. Y.
Clark Co., Geo. F., Windsor Locks, Conn.
De Laval Steam Turbine Co., Trenton, N. J.
General Electric Co., Schenectady, N. Y.
Green Fuel Economizer Co., Mattewan, N. Y.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Savannah Blow Pipe Co., Savannah, Ga.
Standard Blower & Metal Mfg. Co., Atlanta, Ga.
Sturtevant Co., B. F., Hyde Park, Mass.
- Blueprint Apparatus.**
Keuffel & Esser, Hoboken, N. J.
- Bollers.**
Abendroth & Root Mfg. Co., Newburgh, N. Y.
Ames Iron Works, Oswego, N. Y.
Babcock & Wilcox Co., New York, N. Y.
Brownell Co., Dayton, O.
Cameron & Barkley Co., Charleston, S. C.
Casey-Hedges Co., Chattanooga, Tenn.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago House Wrecking Co., Chicago, Ill.
Cole Mfg. Co., R. D., Newnan, Ga.
Cooper Co., C. & G., Mt. Vernon, O.
Gem City Boiler Co., Dayton, O.
Gibbs Machinery Co., Columbia, S. C.
Hartley Boiler Works, Montgomery, Ala.
Heine Safety Boiler Co., St. Louis, Mo.
Keeler Co., E., Williamsport, Pa.
Lookout Boiler & Mfg. Co., Chattanooga, Tenn.
Lombard Iron Works, Augusta, Ga.
Mecklenburg Iron Works, Charlotte, N. C.
Murray Iron Works Co., Burlington, Ia.
Oil City Boiler Co., Oil City, Pa.
Petroleum Iron Works Co., Sharon, Pa.
Phoenix Iron Works Co., Meadville, Pa.
Price Machinery Co., S. M., Norfolk, Va.
Ruemmler-Pawley Mfg. Co., St. Louis, Mo.
Schubert & Sons Co., J. S., Mason, Ga.
Smith-Courtney Co., Richmond, Va.
Southern Engine & Boiler Works, Jackson, Tenn.
Union Iron Works Co., Selma, Ala.
Vaik & Murdock Iron Works, Charleston, S. C.
Vogt Machine Co., Henry, Louisville, Ky.
Walsh & Weidner Boiler Co., Chattanooga, Tenn.
- Boiler Setting.**
Harbison-Walker Refractories Co., Pittsburgh, Pa.
- Boiler Tubes. (See Tubes, Boiler.)**
- Bolts, Nuts, Rivets, Studs and Washers.**
Milton Mfg. Co., Milton, Pa.
Nictown Plate Washer Co., Philadelphia, Pa.
Oliver Iron & Steel Co., Pittsburgh, Pa.
Republic Iron & Steel Co., Youngstown, O.
- Bonds. (Surety, etc.)**
Fidelity & Deposit Co., Baltimore, Md.
- Boring. (Cylinder.)**
Strickland Machine Co., Richmond, Va.
- Bottling Outfits.**
Vilter Mfg. Co., Milwaukee, Wis.
- Box Shooks.**
Naylor & Co., S. E., Gulfport, Miss.
- Brass Goods.**
Bailey-Leiby Co., Charleston, S. C.
Buckeye Iron & Brass Works, Dayton, O.
Powell Co., Wm., Cincinnati, O.
- Brassings. (Cast Iron.)**
Richmond Machine Works, Inc., Richmond, Va.
Strickland Machine Co., Richmond, Va.
- Brass Railings and Grilles, etc.**
McKenna Bros. Brass Co., Pittsburgh, Pa.
- Brewers' Machinery.**
Vilter Mfg. Co., Milwaukee, Wis.
- Brick. (Building.)**
Am. Enamelled Brick & Tile Co., New York, N. Y.
Brookhaven Pressed Brick & Mfg. Co., Brookhaven, Mass.
Carolina Portland Cement Co., Charleston, S. C.
Flake & Co., Inc., New York, N. Y.
Hood, B. Mifflin, Atlanta, Ga.
Hydraulic Press Brick Co., St. Louis, Mo.
O'Connor Brick & Tile Co., Millersville, Pa.
Pittsburgh-Buffalo Co., Pittsburgh, Pa.
Ribley-Mence Brick & Coal Co., Birmingham, Ala.
Scott Brick Co., Alex. A., Knoxville, Tenn.
- Brick. (Blast Furnace, Coke Oven.)**
Ashland Fire Brick Co., Ashland, Ky.
Hood, B. Mifflin, Atlanta, Ga.
- Brick. (Enamelled.)**
Amer. Enam. Brick & Tile Co., New York, N. Y.
- Brick. (Fire Clay.)**
Ashland Fire Brick Co., Ashland, Ky.
Brookhaven Pressed Brick & Mfg. Co., Brookhaven, Mass.
- Brick. (Glazed.)**
Flake & Co., Inc., New York, N. Y.
Harbison-Walker Refractories Co., Pittsburgh, Pa.
Killedam Fire Brick Works, Killam, S. C.
Louisville Fire Brick Works, Highland Park, Ky.
Pomona Terra-Cotta Co., Pomona, N. C.
Stevens' Sons Co., H., Macon, Ga.
Taylor Sons Co., Chas., Cincinnati, O.
Union Mining Co., Mt. Savage, Md.
- Brick. (Magnesia.)**
Harbison-Walker Refractories Co., Pittsburgh, Pa.
- Brick. (Paving.)**
Carlyle Paving Brick Co., Portsmouth, O.
Copeland-Ingalls Shale Brick Co., Birmingham, Ala.
- Brick. (Silica.)**
Harbison-Walker Refractories Co., Pittsburgh, Pa.
- Brick and Clayworking Machinery and Supplies.**
Carnell, George, Philadelphia, Pa.
Ferro-Rolls Brick Machinery Co., St. Louis, Mo.
Freese & Co., E. M., Galion, O.
Gibbs Machinery Co., Columbia, S. C.
Scott-Madden Iron Works, Keokuk, Iowa.
Steele & Sons, J. C., Statesville, N. C.
Taplin-Rice-Clerkin Co., Akron, O.
- Brick Fireplaces. (See Fireplaces, Artistic Brick.)**
- Brick Machinery. (Sand Lime.) (See Sand-Lime Brick Machinery.)**
- Brickwork. (Artistic.)**
Flake & Co., Inc., New York, N. Y.
- Bridges. (Concrete.)**
Concrete Steel Engineering Co., New York, N. Y.
Roanoke Bridge Co., Roanoke, Va.
- Bridges. (Rolling Lift.)**
Scherzer Rolling Lift Bridge Co., Chicago, Ill.
- Bridges.**
American Bridge Co. of New York, New York, N. Y.
Belmont Iron Works, Inc., Philadelphia, Pa.
Champion Bridge Co., Wilmington, O.
Chicago Bridge & Iron Wks., Chicago, Ill.
Des Moines Bridge & Iron Co., Des Moines, Ia.
Farris Bridge Co., Detroit, Mich.
Missouri Val. B'dge & Iron Co., Leavenworth, Kan.
Roanoke Bridge Co., Roanoke, Va.
Scherzer Rolling Lift Bridge Co., Chicago, Ill.
Vincennes Bridge Co., Vincennes, Ind.
Virginia Bridge & Iron Co., Roanoke, Va.
York Bridge Co., York, Pa.
- Bridge and Structural Iron Paints.**
Carolina Portland Cement Co., Charleston, S. C.
Chattanooga Paint Co., Chattanooga, Tenn.
Detroit Granite Co., Detroit, Mich.
Dixon Crucible Co., Joseph, Jersey City, N. J.
Standard Paint Co., New York, N. Y.
- Brimstone.**
Union Sulphur Co., New York, N. Y.
- Briquetting Machinery. (Coal, Lignite, Ore.)**
Devillers, Robert, Brooklyn, N. Y.
- Buckets. (Excavators.)**
Hayward Co., New York, N. Y.
Monaghan Mch. Co., Chicago, Ill.
Owen Bucket Co., Cleveland, O.
Stuebner Iron Works, G. L., Long Island City, New York, N. Y.
Williams Co., The G. H., Cleveland, O.
- Buckets. (Ore, etc.)**
Brown Hoisting Mch. Co., Cleveland, O.
Caldwell & Son Co., H. W., Chicago, Ill.
Dodge Manufacturing Co., Mishawaka, Ind.
Hayward Co., New York, N. Y.
Link-Belt Co., Nictown (Philadelphia), Pa.
Owen Bucket Co., Cleveland, O.
Smith Co., T. L., Atlanta, Ga.
Williams Co., The G. H., Cleveland, O.
- Buhr Stones.**
Starr Co., E. F., Baltimore, Md.
- Builders and Contractors.**
Falls City Construction Co., Louisville, Ky.
Farris Bridge Co., Pittsburgh, Pa.
Ferre Concrete Construction Co., Cincinnati, O.
Lisle-Dunning Const. Co., Oklahoma City, Okla.
Seiden-Breck Construction Co., St. Louis, Mo.
White & Co., J. G., New York, N. Y.
- Buildings. (Financed and Erected.)**
Falls City Construction Co., Louisville, Ky.
Gulf Coast Construction Co., Houston, Tex.
Lisle-Dunning Const. Co., Oklahoma City, Okla.
- Building Supplies.**
Armstrong Mfg. Co., Richmond, Va.
Carolina Portland Cement Co., Charleston, S. C.
Chicago House Wrecking Co., Chicago, Ill.
Southern Lime & Cement Co., Charleston, S. C.
Southern Building Material Co., Norfolk, Va.
- Burlap—Inserted Roofing and Siding. (Flexible Cement.)**
Birmingham & Seaman Co., Chicago, Ill.
- Burners. (Oil.) (See Fuel Oil Equipments.)**
- Bushings. (Oilless, for Loose Pulleys.)**
North Amer. Metaline Co., Long Island City, N. Y.
- Cables.**
American Steel & Wire Co., Chicago, Ill.
Broderick & Bascom Rope Co., St. Louis, Mo.
Hoebing's Sons Co., John A., Trenton, N. J.
Williamsport Wire Rope Co., Williamsport, Pa.
- Cableways. (Overhead Suspension.)**
Broderick & Bascom Rope Co., St. Louis, Mo.
Flory Mfg. Co., S., Bangor, Pa.
Ligerwood Mfg. Co., New York, N. Y.
Mead-Morrison Mfg. Co., Cambridgeport, Mass.
Reobling's Sons Co., John A., Trenton, N. J.
- Can and Box Making Machinery. (Tin.)**
Bliss Co., E. W., Brooklyn, N. Y.
- Cans.**
New Orleans Rfg. & Metal Wks., New Orleans, La.
Southern Can Co., Baltimore, Md.
- Canning Machinery and Supplies.**
Robins & Co., A. K., Baltimore, Md.
Sinclair-Scott Co., Baltimore, Md.
Sprague Canning Machinery Co., Chicago, Ill.
- Carborundum Paper and Cloth.**
Carborundum Co., Niagara Falls, N. Y.
- Card Clothing.**
American Supply Co., Providence, R. I.
- Cars. (Dump, Industrial, Logging and Mine.)**
Austin Mfg. Co., Chicago, Ill.
Baldwin Equipment & Supply Co., Chicago, Ill.
Chase Fdry. & Mfg. Co., Columbus, O.
Georgia Car & Locomotive Co., Atlanta, Ga.
Hunt Co., C. W., West New Brighton, N. Y.
Miles Co., The, Cincinnati, O.
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.
Raleigh Iron Works Co., Raleigh, N. C.
Smith Co., T. L., Atlanta, Ga.
Stuebner Iron Works, G. L., Long Island City, New York, N. Y.
Union Iron Works, Selma, Ala.
Western Wheel Scraper Co., Aurora, Ill.
- Cars. (Passenger and Freight.) (See Railroad Equipment and Supplies.)**
- Car Couplers and Knuckles.**
Safety Car H't'g & L'ght'g Co., New York, N. Y.
- Car Lighting and Heating.**
Safety Car H't'g & L'ght'g Co., New York, N. Y.
- Car Steps. (Extension.)**
Blake Car Step Works, Charlotte, N. C.
- Car Wheels, Axles and Trucks.**
Carnegie Steel Co., Pittsburgh, Pa.
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.
Union Iron Works, Selma, Ala.
- Casters.**
Clara Co., Geo. P., Windsor Locks, Conn.
- Castings. (Aluminum.)**
Aluminum Company of America, Pittsburgh, Pa.
- Castings. (Brass and Bronze.)**
Gilbert & Sons Brass Fdry. Co., A., St. Louis, Mo.
Keystone Bronze Co., Pittsburgh, Pa.
Phosphor-Bronze Smelting Co., Phila., Pa.
Richmond Machine Works, Inc., Richmond, Va.
Stratton & Bragg Co., Petersburg, Va.
Triumph Electric Co., Cincinnati, Ohio.
- Castings. (Iron, Gray, etc.)**
Columbian Iron Works, Chattanooga, Tenn.
Gibbs Machinery Co., Columbia, S. C.
Georgia Car & Locomotive Co., Atlanta, Ga.
Glamorgan Pipe & Foundry Co., Lynchburg, Va.
McWane Pipe Works, Lynchburg, Va.
Poole Engineering & Machine Co., Baltimore, Md.
Roanoke Iron Works, Inc., Roanoke, Va.
Robins Conveying Belt Co., New York, N. Y.
Ross-Meehan Foundry Co., Chattanooga, Tenn.
Stratton & Bragg Co., Petersburg, Va.
U. S. Cast Iron Pipe & Fdy. Co., New York, N. Y.
Vaik & Murdock Iron Works, Charleston, S. C.
Westbrook Elevator Co., Danville, Va.
- Castings. (Malleable Iron and Steel.)**
Missouri Malleable Iron Co., East St. Louis, Ill.
- Castings. (Steel.)**
Crucible Steel Castings Co., Lansdowne, Pa.
Hoffman & Co., R. C., Baltimore, Md.
Hessence Steel Casting Co., Pittsburgh, Pa.
- Ceilings. (Metal.)**
Chattanooga Rfg. & Fdy. Co., Chattanooga, Tenn.
Edwards Manufacturing Co., Cincinnati, O.
Harry Steel Co., O. K., St. Louis, Mo.
Kelsley Metal Cell & Mfg. Co., S. Pittsburgh, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Cement.**
Alpha Portland Cement Co., Easton, Pa.
American Cement Co., Philadelphia, Pa.
American Portland Cement Co., Charleston, S. C.
Cincinnati Portland Cem. Corp., Kingsport, Tenn.
Dixie Portland Cement Co., Chattanooga, Tenn.
Hartman Cement Co., Wm. G., Philadelphia, Pa.
Ironport Portland Cement Co., Ironport, O.
Kilpatrick Sand & Cement Co., Louisville, Ky.
Kosmos Portland Cement Co., Louisville, Ky.
Lehigh Portland Cement Co., Allentown, Pa.
Security Cement & Lime Co., Baltimore, Md.
Southern States Portland Cem. Co., Rockmart, Ga.
Standard Portland Cement Co., Leeds, Ala.
Tidewater Portland Cement Co., Baltimore, Md.
- Cement. (Liquids.)**
Glidden Varnish Co., Cleveland, O.
- Cement Machinery.**
Alsing Engineering Co., J. B., New York, N. Y.
Power & Mining Machinery Co., Cudahy, Wis.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
- Centers. (Collapsible Steel.)**
Blaw Col. Steel Centering Co., Pittsburgh, Pa.
- Chain Blocks.**
Ford Chain Block & Mfg. Co., Philadelphia, Pa.
- Chains. (Dredge, Quarry, Steam Shovel.)**
Weimer Chain & Iron Co., Lebanon, Pa.
- Channellers.**
Ingersoll-Rand Co., New York, N. Y.
- Checks, Metal. (Factory, Time and Merchandise.)**
American Railway Supply Co., New York, N. Y.
- Chemical and Drug Machinery.**
Campbell, F. F., Philadelphia, Pa.
- Chemists.**
Burn, Harry, Birmingham, Ala.
Davis, Geo. C., Philadelphia, Pa.
Frederick & Robertson, Richmond, Va.
McKenna, Dr. Chas. F., New York, N. Y.
- Chimneys. (Steel-Concrete.)**
Specialty Eng. Co., Houston, Tex.
Webster Chimney Co., Chicago, Ill.
- Chloride Accumulator.**
Electric Storage Battery Co., The, Phila., Pa.
- Chucks.**
Morse Twist Drill & Mch. Co., New Bedford, Mass.
- Cities and Towns. (Commercial and Industrial Opportunities.) (See Industrial, Agricultural and Commercial Opportunities.)**
- Clayworking Machinery. (See Brick and Clayworking Machinery.)**
- Cleaning Compound. (Floors, etc.)**
India Alkali Works, Boston, Mass.
- Clocks. (Electro-Self-Winding.)**
Electro-Clock Co., Baltimore, Md.
- Clocks. (Time Recorders.)**
Kaiser, Louis E., Baltimore, Md.
- Clocks. (Watchman.)**
Holtzer-Cabot Electric Co., Boston, Mass.
Kaiser, Louis E., Baltimore, Md.
- Clutches.**
Dodge Manufacturing Co., Mishawaka, Ind.
Positive Clutch & Pulley Works, Buffalo, N. Y.
- Coal.**
Alabama Coal & Iron Co., Birmingham, Ala.
Cincinnati Coal Corp., Spartanburg, S. C.
Cincinnati Fuel Co., Spartanburg, S. C.
Consolidated Coal Co., Inc., New York, N. Y.
Flat Top Fuel Co., Bluefield, W. Va.
Pittsburgh-Buffalo Co., Pittsburgh, Pa.
Tennessee Coal, Iron & R. R. Co., B'gh'm, Ala.
- Coal Briquetting Machinery.**
Devillers, Robert, Brooklyn, N. Y.

- Coal Cutters.**
Ingersoll-Rand Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
- Coal Handling Machinery.**
Bartlett & Snow Co., C. O., Cleveland, O.
Brown Hoisting Mch. Co., Cleveland, O.
Hayward Co., New York, N. Y.
Hunt Co., C. W., West New Brighton, N. Y.
Jeffrey Mfg. Co., Nicetown (Philadelphia), Pa.
Mead-Morrison Mfg. Co., Cambridgeport, Mass.
Robins Conveying Belt Co., New York, N. Y.
Williams Co., The G. H., Cleveland, O.
- Coal Tar and By-Products.**
Barrett Mfg. Co., Philadelphia, Pa.
Carolina Portland Cement Co., Charleston, S. C.
- Coke.**
Alabama Coal & Iron Co., Birmingham, Ala.
Tat Fuel Co., Bluefield, W. Va.
Pittsburgh-Buffalo Co., Pittsburgh, Pa.
Rogers, Brown & Co., Cincinnati, O.
Tennessee Coal, Iron & R. R. Co., B'ing'm, Ala.
- Collapsible Steel Forms.** (For Concrete Work.)
Blaw Col. Steel Centering Co., Pittsburgh, Pa.
- Concrete Construction.** (Steel Reinforcement.)
American Steel & Wire Co., Chicago, Ill.
Brown Hoisting Machinery Co., Cleveland, O.
Concrete Steel Co., The, New York, N. Y.
Concrete Steel Engineering Co., New York, N. Y.
Ferro Concrete Construction Co., Cincinnati, O.
Foster-Creighton Const. Co., Nashville, Tenn.
Jeffrey Mfg. Co., Milwaukee, Wis.
Schmidt Mfg. Co., Houston, Tex.
Specialty Eng. Co., New York, N. Y.
Wight & Co., W. N., New York, N. Y.
- Concrete Curb Protection.** (Steel.)
Steel Protected Concrete Co., Philadelphia, Pa.
- Concrete Dams.**
Amherst Hydraulic Const. Co., Boston, Mass.
Hydraulic Properties Co., New York, N. Y.
- Concrete Floor Dressing.** (Waterproof.)
Gibson Varnish Co., Cleveland, O.
- Concrete Forms.** (Metal.)
Blaw Col. Steel Centering Co., Pittsburgh, Pa.
Schmidt Mfg. Co., Milwaukee, Wis.
- Concrete Forms.** (Steel Collapsible.)
Blaw Col. Steel Centering Co., Pittsburgh, Pa.
- Concrete Mixers.**
Carolina Portland Cement Co., Charleston, S. C.
Jeffrey Mfg. Co., Columbus, O.
Marb-Capron Mfg. Co., Chicago, Ill.
Milwaukee Concrete Mixer & Mch. Co., Milwaukee, Wis.
- Concrete Piles.** (Corrugated.)
The Underground Const. Co., St. Louis, Mo.
- Concrete Reinforcing Bars.**
Carnege Steel Co., Pittsburgh, Pa.
Concrete Steel Co., The, New York, N. Y.
Concrete Steel Engineering Co., New York, N. Y.
Franklin Steel Co., Franklin, Pa.
- Concrete Ties.**
Universal Concrete Tie Co., New Orleans, La.
- Condensers.**
Alger Condenser Co., New York, N. Y.
Dea Bros. Steam Pump Wks., Indianapolis, Ind.
Wainhouse Mfg. Co., Pittsburgh, Pa.
York Mfg. Co., York, Pa.
- Conductor Pipe.**
Hawley Mfg. Co., Cincinnati, O.
Emery & Co., C. G., Pittsburgh, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Contractors.** (Hydro-Electric Developments.)
Multiple Arch Hyd. Const. Co., Ltd., Spartanburg, S. C.
- Contractors' Machinery and Supplies.** (See also Hoisting Machinery.)
American Engineering Co., Philadelphia, Pa.
American Hoist & Derrick Co., St. Paul, Minn.
American Locomotive Co., New York, N. Y.
Austin Mfg. Co., Chicago, Ill.
Case Threshing Mch. Co., J. I., Racine, Wis.
Ode Iron Works, Duluth, Minn.
Contractors' Plant Mfg. Co., Ltd., Buffalo, N. Y.
Ester Machine Works, Pittsford, Pa.
Flory Mfg. Co., S. Bangor, Pa.
Rye Bros. & Co., New York, N. Y.
Ingersoll-Rand Co., New York, N. Y.
Linton, W. J., New York, N. Y.
Kales Co., The, Cincinnati, O.
Marble Metal & Supply Co., New York, N. Y.
Maryland Equipment & Supply Co., Baltimore, Md.
Mead-Morrison Mfg. Co., Cambridgeport, Mass.
Monahan Mch. Co., Chicago, Ill.
Owen Mfg. Co., Wm. J., Knoxville, Tenn.
Owen Bucket Co., Cleveland, O.
Pickett Co., Inc., H. W., Philadelphia, Pa.
Pipes & Contractors' Supply Co., New York, N. Y.
Robins Conveying Belt Co., New York, N. Y.
Smith Co., T. L., Atlanta, Ga.
Sturmer, Iron Works, G. L., Long Island City, New York, N. Y.
- Conveying Machinery.**
Bartlett & Snow Co., C. O., Cleveland, O.
Brown Hoisting Mch. Co., Cleveland, O.
Caldwell & Son Co., W., Chicago, Ill.
Dodge Manufacturing Co., Milwaukee, Ind.
Flory Mfg. Co., S. Bangor, Pa.
Hayward Co., New York, N. Y.
Hunt Co., C. W., West New Brighton, N. Y.
Jeffrey Mfg. Co., Columbus, O.
Liggettwood Mfg. Co., New York, N. Y.
Link-Belt Co. (Philadelphia), Pa.
Mead-Morrison Mfg. Co., Cambridgeport, Mass.
McLanahan-Stone Mch. Co., Hollidaysburg, Pa.
Robins Conveying Belt Co., New York, N. Y.
- Cooling Towers.**
Alger Condenser Co., New York, N. Y.
- Cordage.**
American Mfg. Co., New York, N. Y.
Bridger & Bascom Rope Co., St. Louis, Mo.
Columbian Rope Co., Auburn, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
Turner Co., J. Spencer, New York, N. Y.
Whitlock Cordage Co., New York, N. Y.
- Cordage Machinery.**
Russell-Dawes Machine Co., Boston, Mass.
- Corn-Mill Machinery.**
Burdick & Marmon Co., Indianapolis, Ind.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Hill Co., B. F., Baltimore, Md.
Wall Co., Chambersburg, Pa.
- Cotton Duck.**
Turner Co., J. Spencer, New York, N. Y.
- Cotton Oil and Products.**
American Cotton Oil Co., New York, N. Y.
Cotton Yarns. (Commission Merchants.)
Paine, Linkum & Co., New York, N. Y.
- Cotton-Gin Machinery.**
Carver Cotton Gin Co., East Bridgewater, Mass.
Continental Gin Co., Birmingham, Ala.
Gibbs Machinery Co., Columbus, S. C.
Van Winkle Gin & Machine Co., Atlanta, Ga.
- Cotton-Mill Machinery.**
American Mach. & Mfg. Co., Charlotte, N. C.
American Supply Co., Providence, R. I.
Draper Co., Hopedale, Mass.
Kilson Machine Shop, Lowell, Mass.
Lowell Machine Shop, Lowell, Mass.
Mason Machine Works, Taunton, Mass.
Saco-Pettie Co., Newton Upper Falls, Mass.
Whitins Machine Works, Whitinsville, Mass.
Whitinsville Spinning Ring Co., Whitinsville, Mass.
- Cotton-Mill Supplies.**
American Supply Co., Providence, R. I.
Whitinsville Spinning Ring Co., Whitinsville, Mass.
- Cottonseed-Oil Machinery.**
Buckeye Iron & Brass Works, Dayton, O.
Burruss Engineering Co., Atlanta, Ga.
Callahan Co., W. P., The, Dayton, O.
Cardwell Machine Co., Richmond, Va.
Carver Cotton Gin Co., East Bridgewater, Mass.
Continental Gin Co., Birmingham, Ala.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Van Winkle Gin & Machine Co., Atlanta, Ga.
- Couplings.**
American Spiral Pipe Works, Chicago, Ill.
Brown Co., A. & F., New York, N. Y.
Caldwell Co., Inc., W. E., Louisville, Ky.
Dodge Manufacturing Co., Milwaukee, Ind.
Goldens Foundry & Machine Co., Columbus, Ga.
Shuchter & Sons, Baltimore, Md.
Wood's Sons, T. B., Chambersburg, Pa.
- Couplings.** (Car.)
Welmer Chain & Iron Co., Lebanon, Pa.
- Couplings.** (Hose, Air, Gas, Steam and Water.)
National Tube Co., Pittsburgh, Pa.
- Covering.** (Pipe, Boiler, etc.)
Carolina Portland Cement Co., Charleston, S. C.
Johns-Manville Co., H. W., New York, N. Y.
Southern Pipe Covering Co., Inc., Richmond, Va.
- Cranes.** (Locomotive.)
American Hoist & Derrick Co., St. Paul, Minn.
Brown Hoisting Machinery Co., Cleveland, O.
Reet Machine Works, Pittsford, Pa.
Ohio Locomotive Crane Co., Bucyrus, Ohio.
- Cranes.** (Traveling, Hand, Power, Hydraulic.)
Brown Hoisting Machinery Co., Cleveland, O.
Hayward Co., New York, N. Y.
Lane Mfg. Co., Montpelier, Vt.
Northern Engineering Works, Detroit, Mich.
Speldel, J. G., Reading, Pa.
- Crayons.**
Lowell Crayon Co., Lowell, Mass.
- Crematories.** (Garbage.)
Specialty Eng. Co., Houston, Tex.
- Creosote.**
Carolina Portland Cement Co., Charleston, S. C.
- Creosote Oil.**
Atlantic Turpentine & Refin'g Co., Savannah, Ga.
- Creosoted Wood Block.** (Contractors for Laying.)
Creosoted Wood Block Pav. Co., New Orleans, La.
- Creosoting Works.**
Gulfport Creosoting Co., Gulfport, Miss.
Internat'l Creosot'g & Cons. Co., Galveston, Tex.
National Lumber & Creos. Co., Texarkana, Ark.
Southern Creosoting Co., Ltd., Silel, La.
Southern Wood Preserving Co., Atlanta, Ga.
- Crossarms and Pins.**
Carolina Electrical Co., Raleigh, N. C.
Internat'l Creosot'g & Cons. Co., Galveston, Tex.
Southern Creosoting Co., Ltd., Silel, La.
Western Electric Co., New York, N. Y.
- Crossings.** [See Railroad Frogs and Switches.]
- Cross-tie Machine.**
Standard Cross Tie Mch. Co., New Orleans, La.
- Cross-ties.**
Internat'l Creosot'g & Cons. Co., Galveston, Tex.
National Lumber & Creos. Co., Texarkana, Ark.
Southern Creosoting Co., Ltd., Silel, La.
Universal Concrete Tie Co., New Orleans, La.
- Cross-ties.** (Reinforced Concrete.)
Universal Concrete Tie Co., New Orleans, La.
- Cross-ties.** (Steel.)
Carnege Steel Co., Pittsburgh, Pa.
- Crushers.** (Corn and Cob.)
Gardner Crusher Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Williams Pat. Crusher & Pulv. Co., Chicago, Ill.
- Crushers.** (Rock.)
Austin Mfg. Co., Chicago, Ill.
Case Threshing Mch. Co., J. I., Racine, Wis.
Crescon Co., Geo. V., Philadelphia, Pa.
Gardner Crusher Co., New York, N. Y.
Power & Mining Machinery Co., Cudahy, Wis.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Smith Co., T. L., Atlanta, Ga.
Universal Road Mch. Co., Kingston, N. Y.
Waterloo Cement Mch. Co., Waterloo, Iowa.
Western Wheel Scraper Co., Aurora, Ill.
- Crushing and Pulverizing Machinery.**
Alding Engineering Co., J. R., New York, N. Y.
Austin Mfg. Co., Chicago, Ill.
Bartlett & Snow Co., C. O., Cleveland, O.
Crescon Co., Geo. V., Philadelphia, Pa.
Gardner Crusher Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
McLanahan-Stone Mch. Co., Hollidaysburg, Pa.
Power & Mining Machinery Co., Cudahy, Wis.
Pratt Engineering & Mch. Co., Atlanta, Ga.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Walker & Elliott, Wilmington, Del.
Williams Pat. Crusher & Pulv. Co., Chicago, Ill.
Western Wheel Scraper Co., Aurora, Ill.
- Culverts.** (Corrugated Metal.)
American Rolling Mill Co., Middletown, O.
Canton Culvert Co., The, Canton, O.
Dixie Culvert & Metal Co., Atlanta, Ga.
Harry Steel Co., O. K., St. Louis, Mo.
Kentucky Culvert Mfg. Co., Buechel, Ky.
New Orleans Mfg. & Metal Wks., New Orleans, La.
North Carolina Metal Culv. Co., Greensboro, N. C.
Roanoke Bridge Co., Roanoke, Va.
Tennessee Metal Culvert Co., Nashville, Tenn.
Virginia Metal & Culvert Co., Inc., Roanoke, Va.
- Culverts.** (Vitrified Pipe.)
Bliss Sewer Pipe Co., Macon, Ga.
Stevens Sons Co., H., Macon, Ga.
- Cupola Furnaces.**
Northern Engineering Works, Detroit, Mich.
Paxson Co., J. W., Philadelphia, Pa.
Petroleum Iron Works, Sharon, Pa.
- Cuts.** (Half-tones, Line, etc.)
Baltimore Maryland Engv. Co., Baltimore, Md.
- Cutter Heads.** (Woodworking.)
Whimer & Sons, Samuel J., Milton, Pa.
- Cutter Grinders.**
Abrasive Material Co., Philadelphia, Pa.
Vitrified Wheel Co., Westfield, Mass.
- Dams.** (Multiple Arch Masonry.)
Multiple Arch Hydraulic Const. Co., Ltd., Spartanburg, S. C.
- Dams.** (Reinforced Concrete.)
Amherst Hydraulic Const. Co., Boston, Mass.
Hydraulic Properties Co., New York, N. Y.
- Derricks and Derrick Fittings.**
American Hoist & Derrick Co., St. Paul, Minn.
Monahan Machine Co., Chicago, Ill.
National Hoisting Machine Co., Waterson, N. J.
Waterloo Cement Mch. Co., Waterloo, Iowa.
- Designers and Illustrators.** (Printed Matter.)
Baltimore Maryland Engv. Co., Baltimore, Md.
- Die Blocks.**
Erie Forge Co., Erie, Pa.
- Ditching Machinery.**
American Hoist & Derrick Co., St. Paul, Minn.
American Locomotive Co., New York, N. Y.
American Steel Drudge Co., Ft. Wayne, Ind.
Fairbanks Steam Shovel Co., Marion, O.
Hayward Co., The, New York, N. Y.
Marion Steam Shovel Co., Marion, O.
Monahan Machine Co., Chicago, Ill.
Owen Bucket Co., Cleveland, O.
Williams Co., The G. H., Cleveland, O.
- Doors.** (Birch Veneered.)
Carolina Portland Cement Co., Charleston, S. C.
Mason & Felton Lumber Co., Macon, Ga.
- Doors.** (Steel Rolling.)
Kinneer Mfg. Co., Columbus, O.
- Doors.** (Tin Clad.)
Victor Mfg. Co., Newburyport, Mass.
- Doors, Partitions.** (Metallic.)
Dahlstrom Metallic Door Co., Jamestown, N. Y.
United States Metal Products Co., New York, N. Y.
- Doors, Sash and Blinds.**
Columbus Iron Works Co., Columbus, Ga.
Mason & Felton Lumber Co., Macon, Ga.
- Draftsmen's Supplies.**
Keuffel & Esser, Hoboken, N. J.
Weber & Co., F., Philadelphia, Pa.
- Dredge Chains.**
Welmer Chain & Iron Co., Lebanon, Pa.
- Dredges.** [See Excavating Machinery.]
- Drills.** (Pneumatic.) [See also Drills, Rock and Mining.]
- Drills.** (Prospecting.)
Fort Wayne Electric Works, Fort Wayne, Ind.
Ingersoll-Rand Co., New York, N. Y.
Keystone Steam Well Mach. Co., Beaver Falls, Pa.
- Drills.** (Rock and Mining.)
Chicago Pneumatic Tool Co., Chicago, Ill.
Fort Wayne Electric Works, Fort Wayne, Ind.
Independent Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
Wickes Bros., Jersey City, N. J.
- Drills.** (Twist.)
Manning, Maxwell & Moore, Inc., New York, N. Y.
Morse Twist Drill & Mch. Co., New Bedford, Mass.
- Drive Well Points and Well Supplies.**
National Tube Co., Pittsburgh, Pa.
- Drop Forgings.**
American Spiral Pipe Works, Chicago, Ill.
Richmond Forgings Corporation, Richmond, Va.
- Drop Forging Machinery.**
Bliss Co., E. W., Brooklyn, N. Y.
- Drying Machinery.**
American Blower Co., Detroit, Mich.
American Process Co., New York, N. Y.
Bailey-Lobley Co., The, Charleston, S. C.
Buffalo Forge Co., Buffalo, N. Y.
Ruggles-Coles Engineering Co., New York, N. Y.
Sturtevant Co., B. F., Hyde Park, Mass.
- Drykilns.**
American Blower Co., Detroit, Mich.
Buffalo Forge Co., Buffalo, N. Y.
Union Iron Works Co., Selma, Ala.
- Dumbwaiters.**
Hollister-Whitney Co., Quincy, Ill.
Speldel Elevator & Mfg. Co., Sidney, O.
Speldel, J. G., Reading, Pa.
- Dump Wagons and Wagon Boxes.**
Case Threshing Mch. Co., J. I., Racine, Wis.
Eagle Wagon Works, Auburn, N. Y.
Troy Wagon Works Co., Troy, O.
- Dust-Collecting Systems.**
Buffalo Forge Co., Buffalo, N. Y.
Savannah Blow Pipe Co., Savannah, Ga.
Standard Blower & Metal Mfg. Co., Atlanta, Ga.
- Dynamite.**
du Pont de Nemours Powder Co., E. I., Wilmington, Del.
- Dynamics and Motors.** (Steam Turbine.)
De Laval Steam Turbine Co., Trenton, N. J.
Emerson Steam Pump Co., Alexandria, Va.
Fort Wayne Electric Works, Ft. Wayne, Ind.
General Electric Co., Schenectady, N. Y.
Southwest Fdry. & Mch. Co., Philadelphia, Pa.
Terry Steam Turbine Co., New York, N. Y.
Western Electric Co., New York, N. Y.
Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.
- Eaves.** (Trough.)
Edwards Mfg. Co., Cincinnati, O.
Hawley & Co., C. G., Pittsburgh, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Ejectors.** (Auto. Sewage.)
Blaisdell Machinery Co., Bradford, Pa.
- Electric Machinery.** (Dynamoes, Generators, Motors, etc.)
Allis-Chalmers Co., Milwaukee, Wis.
American Engine Co., Bound Brook, N. J.
American Machine Co., Louisville, Ky.
Crockett-Wheeler Co., Amper, N. J.
Engel's Elect. & Mch. Wks., St. Joseph, Mich.
Fairbanks, Morse & Co., Chicago, Ill.
Fort Wayne Electric Works, Ft. Wayne, Ind.
General Electric Co., Schenectady, N. Y.
Gregory Electric Co., Chicago, Ill.
Kentucky Electrical Co., Owensboro, Ky.
Kleinham, H., Pittsburgh, Pa.
Lee Electric Co., Baltimore, Md.
Miller-Owen Elec. Co., Pittsburgh, Pa.
Piedmont Electric Co., Asheville, N. C.
Ridgway Dynamo & Engine Co., Ridgway, Pa.
Robbins & Myers Co., Springfield, O.
Southwest Fdry. & Mch. Co., Philadelphia, Pa.
Sturtevant Co., B. F., Hyde Park, Mass.
Triumph Electric Co., Cincinnati, O.
Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.
- Electrical Contractors, Instruments and Supplies.**
American Mach. & Mfg. Co., Charlotte, N. C.
Crockett-Wheeler Co., Amper, N. J.
Electrical Engineers' Equip. Co., Chicago, Ill.
Engel's Elect. & Mch. Wks., St. Joseph, Mich.
Fort Wayne Electric Works, Ft. Wayne, Ind.
General Electric Co., Schenectady, N. Y.
Gregory Electric Co., Chicago, Ill.
Johns-Manville Co., H. W., New York, N. Y.
Kentucky Electrical Co., Owensboro, Ky.
Lee Electric Co., Baltimore, Md.
Levy, Deronda, Columbia, Ga.
Piedmont Electric Co., Asheville, N. C.
Robbins & Myers Co., Springfield, O.
Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.
- Electrical Power-House Supplies.**
Electrical Engineers' Equip. Co., Chicago, Ill.
- Elevator Magnets.** [See Magnet Electro.]
- Elevating, Conveying and Power Transmission Machinery.** [See also Conveying Mch. and Power Transmission Mch.]
Jeffrey Mfg. Co., Columbus, O.
- Elevators.**
Albro-Clem Elevator Co., Philadelphia, Pa.
American Machine Co., Louisville, Ky.
Curran Elevator Co., James H., Cincinnati, O.
Hollister-Whitney Co., Quincy, Ill.
Kansas City Elevator Mfg. Co., Kansas City, Mo.
Moffatt Machinery Mfg. Co., Charlotte, N. C.
Ohio Elevator & Machine Co., Columbus, O.
Otis Elevator Co., New York, N. Y.
Sidney Elevator & Mfg. Co., Sidney, O.
Speldel, J. G., Reading, Pa.
Warner Elevator Co., Baltimore, Md.
Westbrook Elevator Co., Danville, Va.
- Elevator Safety Appliances.**
Roth Elevator Safety Co., Inc., Baltimore, Md.
- Elevator Buckets.**
Caldwell & Son Co., H. W., Chicago, Ill.
Dodge Mfg. Co., Milwaukee, Ind.
Jeffrey Mfg. Co., Columbus, O.
Link-Belt Co., Philadelphia, Pa.
- Elevator Enclosures and Cabs.**
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Cincinnati Mfg. Co., Cincinnati, O.
Dow Wire Works, Louisville, Ky.
Dufur & Co., Baltimore, Md.
Dufur, Bazzett & Co., Baltimore, Md.
Meyers Mfg. Co., The, Fred J., Hamilton, O.
Ohio Elevator & Machine Co., The, Columbus, O.
Ohio Elevator Co., New York, N. Y.
Southern Wire & Iron Mfg. Co., Dallas, Tex.
- Elevator Rope.** [See Wire Rope.]
- Elevator Safety Gates.**
Richmond Safety Gate Co., Richmond, Ind.
- Emery Wheels.** [See Grinding Wheels.]
- Engineers—**
CONSULTING.
Fols, P. Julius, Lexington, Ky.
Graham, Edgar M., Muskogee, Okla.
Hill, Norman A., Baltimore, Md.
Judson Engineering Co., H. B., Savannah, Ga.
Lewis, Fred H., Birmingham, Ala.
Lide, Martin J., Birmingham, Ala.
Macfarren, S. J., Washington, D. C.
Nichols, Charles H., New York, N. Y.
Quick, Alfred M., Baltimore, Md.
- DESIGNING—CONSTRUCTING.**
Brindley Co., New York, N. Y.
Creston Engineering Co., Nashville, Tenn.
Gulf Coast Const. Co., Houston, Tex.
Hague, John, St. Louis, Mo.
Harlow Co., James H., Baltimore, Md.
Judson Engineering Co., H. B., Savannah, Ga.
Kloft, H. O., San Antonio, Tex.
Specialty Eng. Co., Houston, Tex.
Stone & Webster Eng. Co., Boston, Mass.
Summers & Co., L. L., Chicago, Ill.
White & Co., J. G., New York, N. Y.
- ENGINEERING—CONSTRUCTING, POWER PLANTS, ETC.**
Brindley Co., New York, N. Y.
Budge, Day & Zimmerman, Philadelphia, Pa.
Emory & Eisenberg, Philadelphia, Pa.
Hague, John, St. Louis, Mo.
Lockwood, Greene & Co., Boston, Mass.
MacLauchlan Eng. Co., J. H., Baltimore, Md.
Manning-Hughes Co., Charlotte, N. C.
Multiple Arch Hyd. Const. Co., Ltd., Spartanburg, S. C.
Quick, Alfred M., Baltimore, Md.
Spokane, J. E., Greenfield, S. C.
Spiker, Wm. C., Atlanta, Ga.
Stevens, John A., Lowell, Mass.
Virginia Bridge & Iron Co., Roanoke, Va.
Whitfield, Geo. H., Richmond, Va.
- DRAINAGE.**
Brindley Co., New York, N. Y.
Morgan Engineering Co., Memphis, Tenn.
- EFFICIENCY.**
Macfarren, S. J., Washington, D. C.
- ELECTRIC CIVIL, ETC.**
Arnold Co., The, Chicago, Ill.
Brindley Co., New York, N. Y.
Cottrill & Cottrill, Greenwood, S. C.
Crockett-Wheeler Co., Amper, N. J.
Drane, Brent S., Charlotte, N. C.
Emory & Eisenberg, Philadelphia, Pa.
Kellholts, P. O., Baltimore, Md.
Layman, E. F., Cincinnati, O.
Lewis, Fred H., Birmingham, Ala.
Lide, Martin J., Birmingham, Ala.
Manning-Hughes Co., Charlotte, N. C.
Morgan Engineering Co., Memphis, Tenn.
Potter, Alexander, New York, N. Y.
Reading & Howard, Baltimore, Md.
Rucker, B. Parks, Charlotte, N. C.
Waldo, W., Houston, Tex.
White & Co., J. G., New York, N. Y.
Whitfield, Geo. H., Richmond, Va.
Young Co., C. S., San Antonio, Tex.
- GAS.**
Lea, Henry I., Chicago, Ill.
- GEOLOGICAL.**
Bureau of Assoc. Geological Engineers, Boston, Mass.
Davis, Geo. C., Philadelphia, Pa.
Fols, P. Julius, Lexington, Ky.
Froehling & Robertson, Richmond, Va.
- HYDRAULIC, SANITARY AND SEWERAGE.**
Brindley Co., New York, N. Y.
Burgwyn, C. F., Richmond, Va.
Harlow Co., James H., Baltimore, Md.
Hutton, T. Chalkley, Wilmington, Del.
Manning-Hughes Co., Charlotte, N. C.
McCarty, Co., Inc., The, J. B., Atlanta, Ga.
Multiple Arch Hydraulic Const. Co., Ltd., Spartanburg, S. C.
Myers, E. W., Greensboro, N. C.
Pew, Arthur, Atlanta, Ga.
Specialty Eng. Co., Houston, Tex.
Tucker & Laxon, Charlotte, N. C.
- ICE AND REFRIGERATING.**
Hague, John, St. Louis, Mo.
Tait-Nordmeyer Eng. Co., St. Louis, Mo.

- Engineers—**
ILLUMINATING.
Holophane Co., Newark, Ohio.
- LANDSCAPE.**
Drane, Brent S., Charlotte, N. C.
Reding & Howard, Baltimore, Md.
- REINFORCED CONCRETE CONSTRUCTION, BUILDINGS, BRIDGES, ETC.**
Concrete Steel Engineering Co., New York, N. Y.
Gardner & Howe, Memphis, Tenn.
Layman, E. F., Cincinnati, O.
- WATER-WORKS.**
Burgwyn, C. P. E., Richmond, Va.
Myers, E. W., Greensboro, N. C.
- Engines.**
GAS AND GASOLINE.
Blaisdell Machinery Co., Bradford, Pa.
Bogart Gas Power Eng. Co., Buffalo, N. Y.
Fairbanks, Morse & Co., Chicago, Ill.
Mietz, A., New York, N. Y.
Otto Gas Engine Works, Philadelphia, Pa.
Power Mfg. Co., Lima, Ohio.
Standard Gas Power Co., Atlanta, Ga.
Westinghouse Machine Co., The, Pittsburgh, Pa.
- OIL.**
Covington Mch. Co., New York, N. Y.
Mietz, A., New York, N. Y.
Power Mfg. Co., Lima, Ohio.
- Engines. (Steam.)**
Allis-Chalmers Co., Milwaukee, Wis.
American Blower Co., Detroit, Mich.
American Engine Co., Round Brook, N. J.
American Hoist & Derrick Co., St. Paul, Minn.
Ames Iron Works, Oswego, N. Y.
Atlas Engine Works, Indianapolis, Ind.
Ball Engine Co., Erie, Pa.
Brownell Co., The, Dayton, O.
Buffalo Forge Co., Buffalo, N. Y.
Cameron & Hartley Co., Charleston, S. C.
Chicago House Wrecking Co., Chicago, Ill.
Cooper Co., C. & G. M., Vernon, O.
Engberg's Elect. & Mech. Wks., St. Joseph, Mich.
Gibbs Machinery Co., Columbus, S. C.
Greenwald Co., I. & E., Cincinnati, O.
Griffith & Wedge Co., The, Zanesville, O.
Harrisburg Fdry. & Mch. Wks., Harrisburg, Pa.
Hooven, Owen, Rentschler Co., Hamilton, O.
Houston, Stanwood & Gamble Co., Cincinnati, O.
Lefell & Co., James, Springfield, O.
Lombard Iron Works, Augusta, Ga.
Mecklenburg Iron Works, Charlotte, N. C.
Morris Machine Works, Baldwinville, N. Y.
Murray Iron Works Co., Burlington, Ia.
Oil City Boiler Co., Oil City, Pa.
Phoenix Iron Works, Meadville, Pa.
Price Machinery Co., S. M., Norfolk, Va.
Ridgway Dynamo & Engine Co., Ridgway, Pa.
Schiffel's Sons Co., J. S., Macon, Ga.
Smith-Courtney Co., Richmond, Va.
Southern Engine & Boiler Works, Jackson, Tenn.
Sturtevant Co., B. F., Hyde Park, Mass.
Union Iron Works Co., Selma, Ala.
Vilter Mfg. Co., Milwaukee, Wis.
Westinghouse Machine Co., Pittsburgh, Pa.
- Envelope Sealer and Stamper.**
Commercial Sales & Mfg. Co., Oberlin, O.
- Envelopes.**
Young & Selden Co., Baltimore, Md.
- Excavating Machinery. (Steam Shovels, etc.)**
American Locomotive Co., New York, N. Y.
American Steel Dredge Co., Ft. Wayne, Ind.
Baldwin Equipment & Supply Co., Chicago, Ill.
Bucyrus Co., So. Milwaukee, Wis.
Cable Excavator Co., Philadelphia, Pa.
Fairbank Steam Shovel Co., Marion, O.
Hayward Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
Lidgerwood Mfg. Co., New York, N. Y.
Males Co., Cincinnati, O.
Marion Steam Shovel Co., Marion, O.
Monaghan Machine Co., Chicago, Ill.
Owen Bucket Co., Cleveland, O.
Williams Co., The G. H., Cleveland, O.
- Excelsior Machinery.**
Kline, Lewis T., Alpena, Mich.
- Exhaust Heads.**
Abendroth & Root Mfg. Co., Newburg, N. Y.
American Spiral Pipe Works, Chicago, Ill.
Greenwald Co., I. & E., Cincinnati, O.
Hoppes Mfg. Co., Springfield, O.
- Exhibits. (Machinery Builders' Equipment and Supplies.)**
Bourse, The, Philadelphia, Pa.
Builders' Exchange, Baltimore, Md.
- Expansion Joints.**
Alberger Condenser Co., New York, N. Y.
Badger & Sons Co., E. B., Boston, Mass.
- Explosives.**
de Pont-de Nemours Powder Co., E. I., Wilmington, Del.
- Extension Steps. (For Railroad Coaches.)**
Blake Car Step Works, Charlotte, N. C.
- Factory Sites. (Town and Railroad.) [See Industrial, Agricultural and Commercial Opportunities.]**
- Fans. (Electric.)**
General Electric Co., Schenectady, N. Y.
Robbins & Myers Co., Springfield, O.
Western Electric Co., New York, N. Y.
Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.
- Fans. (Ventilating.) [See Blowers, Exhaust Joint.]**
- Fastener Driving Machine. (Corrugated Joint.)**
Saranne Machine Co., St. Joseph, Mich.
- Feed-Water Heaters and Purifiers.**
Alberger Condenser Co., New York, N. Y.
American Water Softener Co., Philadelphia, Pa.
Blake & Knowles Steam Pump Works, New York, N. Y.
Brownell Co., Dayton, O.
Exeter Machine Works, Pittston, Pa.
Gibbs Machinery Co., Columbus, S. C.
Greenwald Co., I. & E., Cincinnati, O.
Hoppes Mfg. Co., Springfield, O.
McAdoo, Thomas, Philadelphia, Pa.
Murray Iron Works Co., Burlington, Ia.
National Pipe Bending Co., New Haven, Conn.
Scaife & Sons Co., Wm. B., Pittsburgh, Pa.
Stewart Heater Co., Buffalo, N. Y.
Wilmington Iron Works, Wilmington, N. O.
- Feed-Water Heater and Purifier and Oil Separator Combined.**
Blake & Knowles Steam Pump Works, New York, N. Y.
Stewart Heater Co., Buffalo, N. Y.
- Felt. (Building, Sheathing.)**
Barrett Mfg. Co., Philadelphia, Pa.
- Fencing, Entrance Gates. (Iron, Steel, Wire.)**
American Steel & Wire Co., Chicago, Ill.
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Bew Wire Works, Louisville, Ky.
- Dufur & Co., Baltimore, Md.**
New Jersey Wire Cloth Co., Trenton, N. J.
Ohio Elevator & Mch. Co., The, Columbus, O.
- Fertilizer Machy. [See also Phosphate Mch.]**
Campbell, P. F., Philadelphia, Pa.
Pratt Eng. & Mch. Co., Atlanta, Ga.
Smith Co., T. L., Atlanta, Ga.
Valk & Murdoch Iron Works, Charleston, S. C.
Walker & Elliott, Wilmington, Del.
Wilmington Iron Works, Wilmington, N. O.
- Files.**
Barnett Co., G. & H., Philadelphia, Pa.
Delta File Works, Philadelphia, Pa.
Nicholson File Co., Providence, R. I.
- Filters. (Water, for Domestic and Industrial Purposes.)**
American Water Softener Co., Philadelphia, Pa.
International Filter Co., Chicago, Ill.
Lynn-Superior Co., The, Cincinnati, O.
New York Con. Jewell Fil. Co., New York, N. Y.
Roberts Filter Mfg. Co., Philadelphia, Pa.
Scaife & Sons Co., Wm. B., Pittsburgh, Pa.
Tucker & Laxton, Charlotte, N. C.
- Financial Publication.**
Financial Review, New York, N. Y.
- Fire Alarm Boxes.**
Balto. Mch. Products Co. (Relay Station P. O.), Baltimore, Md.
- Fire Clay Brick. [See Brick, Fire Clay.]**
- Fire Box Blocks.**
Ashland Fire Brick Co., Ashland, Ky.
- Fire Door Fixtures.**
Victor Mfg. Co., Newburyport, Mass.
- Fire Extinguishers.**
Badger & Sons Co., E. B., Boston, Mass.
General Fire Extinguisher Co., Providence, R. I.
Kaiser, Louis E., Baltimore, Md.
- Fire Extinguishing Apparatus.**
General Fire Extinguisher Co., Providence, R. I.
- Fire Escapes.**
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Chesapeake Iron Works, Baltimore, Md.
- Fire Insurance.**
Hartford Fire Insurance Co., Hartford, Conn.
- Fireplaces. (Artistic Brick.)**
Flake & Co., Inc., New York, N. Y.
- Fireproof Building Construction. (Steel.) [See Concrete Construction.]**
- Fireproof Building Material.**
Dahlstrom Metallic Door Co., Jamestown, N. Y.
Johns-Manville Co., H. W., New York, N. Y.
- Fireproof Doors and Shutters.**
Dahlstrom Metallic Door Co., Jamestown, N. Y.
Kline Mfg. Co., Columbus, O.
New Orleans Roof & Metal Co., New Orleans, La.
Richmond Safety Gate Co., Richmond, Ind.
United States Metal Products Co., New York, N. Y.
Victor Mfg. Co., Newburyport, Mass.
- Fireproof Windows. [See Window Frames and Sashes (Fireproof).]**
- Flanges. (Iron and Steel.)**
American Cast Iron Pipe Co., Birmingham, Ala.
American Pipe & Construction Co., Phila., Pa.
American Spiral Pipe Works, Chicago, Ill.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Dart Manufacturing Co., E. M., Providence, R. I.
Glamorgan Pipe & Foundry Co., Lynchburg, Va.
McWane Pipe Works, Lynchburg, Va.
National Tube Co., Pittsburgh, Pa.
U. S. Cast Iron Pipe & Fdy. Co., New York, N. Y.
Whitlock Coil Pipe Co., Hartford, Conn.
Wood & Co., B. D., Philadelphia, Pa.
- Flexible Joints.**
Moran Flex. Steam Joint Co., Inc., Louisville, Ky.
- Flooring. (Cement.)**
Dagostin & Angelini Bros., Montgomery, Ala.
- Flooring. (Hardwood, Maple, Oak.)**
Carolina Portland Cement Co., Charleston, S. C.
Northcross Mantel Co., W. J., Memphis, Tenn.
Nashville Harrowd Flooring Co., Nashville, Tenn.
- Flour and Grist Mill Machinery and Supplies.**
Caldwell & Sons Co., H. W., Chicago, Ill.
Gibbs Machinery Co., Columbus, S. C.
Nordyke & Marmon Co., Indianapolis, Ind.
Salem Foundry & Machine Works, Salem, Va.
Starr Co., B. F., Baltimore, Md.
Vench & Co., L. R., Louisville, Ky.
Wolf Co., Chambersburg, Pa.
- Flushtank Regulator.**
Modern Iron Works, Quincy, Ill.
- Foot Valves.**
Cameron Steam Pump Wks., A. S., New York, N. Y.
- Forges.**
Buffalo Forge Co., Buffalo, N. Y.
Sturtevant Co., B. F., Hyde Park, Mass.
- Forgings.**
Richmond Forgings Corporation, Richmond, Va.
Weimer Chain & Iron Co., Lebanon, Pa.
- Forgings. (Hammered.)**
Erie Forge Co., Erie, Pa.
- Foundations. (Waterproof.)**
Underground Constr. Co., The, St. Louis, Mo.
- Foundations. (Open or Pneumatic.)**
Missouri Val. Bridge & Iron Co., Leavenworth, Kan.
- Foundry Equipment and Supplies.**
Paxson Co., J. W., Philadelphia, Pa.
- Frogs. [See Railroad Frogs and Switches.]**
- Fuel Economizer.**
Green Fuel Economizer Co., Mattewan, N. Y.
Sturtevant Co., B. F., Hyde Park, Mass.
- Fuel Oil.**
Gulf Refining Co., Pittsburgh, Pa.
Texas Co., The, New York, N. Y.
- Fuel Oil Equipment.**
Petroleum Iron Works Co., Sharon, Pa.
- Fuses, Bases and Fittings.**
Johns-Manville Co., H. W., New York, N. Y.
- Galvanized Steel and Iron.**
American Sheet & Tin Plate Co., Pittsburgh, Pa.
J. C. H. Galvanizing Co., Philadelphia, Pa.
La Belle Iron Works, Steubenville, O.
McCalla, Harold, Philadelphia, Pa.
New Orleans Roof & Metal Co., New Orleans, La.
Wood Iron & Steel Co., Alan, Philadelphia, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.
- Garages. (Fireproof and Portable.)**
Harry Steel Co., O. E., St. Louis, Mo.
- Gas Blowers. (Turbine.)**
Terry Steam Turbine Co., New York, N. Y.
- Gas Compressors.**
Blaisdell Machinery Co., Bradford, Pa.
Ingersoll-Rand Co., New York, N. Y.
- Gas Engines. [See Engines, Gas.]**
- Gas Holders.**
Chicago Bridge & Iron Wks., Chicago, Ill.
- Gas Plants.**
Western Gas Construction Co., Ft. Wayne, Ind.
- Gas Plants and Benches.**
Improved Equipment Co., New York, N. Y.
- Gas Producers.**
Bogart Gas Power Eng. Co., Buffalo, N. Y.
Improved Equipment Co., New York, N. Y.
Otto Gas Engine Works, Philadelphia, Pa.
Standard Gas Power Co., Atlanta, Ga.
Westinghouse Machine Co., Pittsburgh, Pa.
Wood & Co., R. D., Philadelphia, Pa.
- Gasoline and Kerosene.**
Gulf Refining Co., Pittsburgh, Pa.
Texas Co., The, New York, N. Y.
- Gas and Steam Fitters' Tools.**
Saunders' Sons, D., Yonkers, N. Y.
- Gaskets. (Rubber.)**
N. J. Car Spring & Rubber Co., Jersey City, N. J.
- Gears.**
Albro-Clem Elevator Co., Philadelphia, Pa.
Brown Co., A. & F., New York, N. Y.
Caldwell Co., Inc., W. R., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Dayton Globe Iron Works Co., Dayton, O.
Dodge Manufacturing Co., Mishawaka, Ind.
Earle Gear & Machine Co., The, Philadelphia, Pa.
Jeffrey Mfg. Co., Columbus, O.
Poole Engineering & Machine Co., Baltimore, Md.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Trump Mfg. Co., Springfield, O.
- Geologists.**
Bureau of Assoc. Geological Engineers, Boston, Mass.
Froehling & Robertson, Richmond, Va.
- Glass. (Plate, etc.)**
Blawie & Co., Memphis, Tenn.
Holophane Co., Newark, Ohio.
- Governors.**
Pickering Governor Co., Portland, Conn.
- Grain Elevator Supplies.**
Caldwell & Sons Co., H. W., Chicago, Ill.
Dodge Manufacturing Co., Mishawaka, Ind.
Jeffrey Mfg. Co., Columbus, O.
Link-Belt Co., Nicetown (Philadelphia), Pa.
- Granite.**
Harris Granite Quarries Co., Salisbury, N. C.
- Graphite.**
Detroit Graphite Co., Detroit, Mich.
Dixon Crucible Co., Joseph, Jersey City, N. J.
- Grates and Grate Bars.**
Thomas Grate Bar Co., Birmingham, Ala.
- Gravel.**
Arundel Sand & Gravel Co., Baltimore, Md.
Lathrop & Co., C. P., Richmond, Va.
- Grease.**
Albany Lubricating Co., New York, N. Y.
- Grease Cups.**
Albany Lubricating Co., New York, N. Y.
- Greases and Lubricating Compounds.**
Albany Lubricating Co., New York, N. Y.
Galena Signal Oil Co., Franklin, Pa.
Robinson & Son Co., Wm. O., Baltimore, Md.
Texas Co., The, New York, N. Y.
- Grinders. (Gypsum, Limestone, etc.)**
Gardner Crusher Co., New York, N. Y.
Williams Pat. Crusher & Pulv. Co., Chicago, Ill.
- Grinding Wheels.**
Abrasive Material Co., Philadelphia, Pa.
Carborundum Co., Niagara Falls, N. Y.
Norton Co., Worcester, Mass.
Vitrified Wheel Co., Westfield, Mass.
- Groovers.**
Huther Bros. Saw Mfg. Co., Rochester, N. Y.
- Gunpowder.**
de Pont-de Nemours Powder Co., E. I., Wilmington, Del.
- Hammers. (Steam, Power, Pneumatic.)**
Chicago Pneumatic Tool Co., Chicago, Ill.
Independent Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
- Hand Elevators.**
McKenna Bros. Brass Co., Pittsburgh, Pa.
Sidney Elevator Mfg. Co., Sidney, O.
- Handle Machinery. [See Woodworking Mch.]**
- Hangers. [See Pulleys, Shafting and Hangers.]**
- Hardwood Doors and Trim.**
Massee & Felton Lumber Co., Macon, Ga.
- Hauling Engines. (Steam Traction.)**
Case Threshing Mach. Co., J. I., Racine, Wis.
- Hay Tools.**
Myers & Bro., F. E., Ashland, O.
- Heater. (Portable, for Bituminous Pavements.)**
Engle-Coles Engineering Co., New York, N. Y.
- Heating Apparatus, Engineers and Contractors.**
American Blower Co., Detroit, Mich.
Buffalo Forge Co., Buffalo, N. Y.
Monitor Steam Generator Mfg. Co., Balto., Md.
Peck-Hammond Co., The, Cincinnati, O.
Sturtevant Co., B. F., Hyde Park, Mass.
- Holisting Machinery.**
American Engineering Co., Philadelphia, Pa.
American Hoist & Derrick Co., St. Paul, Minn.
Brown Hoisting Mch. Co., Cleveland, O.
Byers Machine Co., John F., Ravenna, O.
Clyde Iron Works, Duluth, Minn.
Contractors' Plant Mfg. Co., Ltd., Buffalo, N. Y.
Exeter Machine Works, Pittston, Pa.
Flory Mfg. Co., S., Bangor, Pa.
Hayward Co., New York, N. Y.
Link-Belt Co., Nicetown (Philadelphia), Pa.
Lidgerwood Mfg. Co., New York, N. Y.
Males Co., Cincinnati, O.
Mead-Morrison Mfg. Co., Cambridgeport, Mass.
Monaghan Machine Co., Chicago, Ill.
National Hoisting Engine Co., Harrison, N. J.
Smith Co., T. L., Atlanta, Ga.
Stroudsburg Engine Works, Stroudsburg, Pa.
- Holists.**
CHAIN.
Ford Chain Block & Mfg. Co., Philadelphia, Pa.
Speidel, J. G., Reading, Pa.
- ELECTRIC.**
American Hoist & Derrick Co., St. Paul, Minn.
Lidgerwood Mfg. Co., New York, N. Y.
Monaghan Mch. Co., Chicago, Ill.
Northern Engineering Works, Detroit, Mich.
Patten Mfg. Co., Chattanooga, Tenn.
- PNEUMATIC MOTORS.**
Chicago Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
- Hoops, Bands, etc. (Galvanized.)**
J. C. H. Galvanizing Co., Philadelphia, Pa.
McCalla, Harold, Philadelphia, Pa.
- Hoops. (Barrel.)**
American Steel & Wire Co., Chicago, Ill.
Carnegie Steel Co., Pittsburgh, Pa.
- Hose.**
Eureka Fire Hose Mfg. Co., New York, N. Y.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
- Hotels.**
Great Southern Hotel, Gulfport, Miss.
Hotel Essex, Boston, Mass.
St. Charles Hotel, New Orleans, La.
- Hot Water Service Heaters.**
Alberger Pump Co., New York, N. Y.
- Hydrants.**
Bourbon Copper & Brass Wks. Co., Cincinnati, O.
Columbian Iron Works, Chattanooga, Tenn.
Glamorgan Pipe & Foundry Co., Lynchburg, Va.
Goulds Mfg. Co., Seneca Falls, N. Y.
Myers & Bro., F. E., Ashland, O.
Wood & Co., R. D., Philadelphia, Pa.
- Hydraulic Giants.**
American Spiral Pipe Works, Chicago, Ill.
- Hydraulic Rams.**
Goulds Mfg. Co., Seneca Falls, N. Y.
Rife Engine Co., New York, N. Y.
- Icemaking Machinery and Supplies.**
Columbus Iron Works Co., Columbus, Ga.
Creamery Package Mfg. Co., De Kalb, Ill.
Frick Co., The, Waynesboro, Pa.
Hague, John, St. Louis, Mo.
Remington Machine Co., Wilmington, Del.
Tait-Nordmeyer Eng. Co., St. Louis, Mo.
Vilter Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.
York Mfg. Co., York, Pa.
- Incorporators. (Companies.)**
Delaware Trust Co., Wilmington, Del.
- Industrial, Agricultural and Commercial Opportunities.**
CITIES AND TOWNS.
Atlanta, Ga., Ga. Bureau of Indus'y & Imm'gr.
Baltimore, Md., Gas & Electric Co.
Bedford City, Va., Board of Trade.
Fayetteville, N. C., Chamber of Commerce.
Newport News, Va., Old Dominion Land Co.
Texas City, Tex., Texas City Transportation Co.
Winchester, Va., Business Men's League.
- RAILROADS.**
Atlanta, Birmingham & Atlantic R. R., Atlanta, Ga.
Atlanta & West Point R. R. Co., Montgomery, Ala.
Baltimore & Ohio Railroad, Baltimore, Md.
Carolina, Clinchfield & O. Ry., Johnson City, Tenn.
Central of Georgia Ry. Co., Savannah, Ga.
Florida East Coast Ry., St. Augustine, Fla.
Illinois Central Railroad Co., Chicago, Ill.
Norfolk & Western Railway, Roanoke, Va.
Richmond, Fredericksburg & Potomac Railroad, Ashland, Va.
Seaboard Air Line, Portsmouth, Va.
Southern Railway Co., Washington, D. C.
Tennessee Central Railroad Co., Cookeville, Tenn.
Virginia Railway & Power Co., Richmond, Va.
- Industrial Track Work. [See Railways, etc.]**
- Injectors.**
Jenkins Bros., New York, N. Y.
Sellers & Co., Inc., Wm., Philadelphia, Pa.
- Insulating Materials.**
Johns-Manville Co., H. W., New York, N. Y.
- Insurance.**
Hartford Fire Insurance Co., Hartford, Conn.
Hartford Steam Boiler Inspection & Ins. Co., Hartford, Conn.
Maryland Casualty Co., Baltimore, Md.
- Interior Trim. (Metallic.)**
Dahlstrom Metallic Door Co., Jamestown, N. Y.
U. S. Metal Products Co., New York, N. Y.
- Interstate Commerce Practices.**
Van Sant, Frank, Washington, D. C.
- Iron.**
Alabama Coal & Iron Co., Birmingham, Ala.
American Rolling Mill Co., Middletown, O.
La Belle Iron Works, Steubenville, O.
Milton Mfg. Co., Milton, Pa.
Oliver Iron & Steel Co., Pittsburgh, Pa.
Republic Iron & Steel Co., Youngstown, O.
Tennessee Coal, Iron & R. R. Co., B'ham, Ala.
Wood Iron & Steel Co., Alan, Philadelphia, Pa.
- Irrigation Machinery.**
Blakeslee Mfg. Co., Du Quoin, Ill.
Cameron Steam Pump Wks., A. S., New York, N. Y.
- Journals. (Financial.)**
Financial Review, New York, N. Y.
- Kettles. (Steam Jacket.)**
Badger & Sons Co., E. B., Boston, Mass.
Petroleum Iron Works Co., Sharon, Pa.
- Key Seater. (Portable.)**
Burr & Son, John T., Brooklyn, N. Y.
- Knitting Machinery.**
Acme Knitting Machine & Needle Co., Franklin, N. H.
- Lacquers. (All Purposes.)**
Durlake Mfg. Co., St. Louis, Mo.
- Lamp Posts. (Electric, Gas.)**
Western Gas Construction Co., Ft. Wayne, Ind.
- Lamps. (Arc and Incandescent.)**
Boston Incandescent Lamp Co., Danvers, Mass.
Columbia Incandescent Lamp Co., St. Louis, Mo.
Fosteria Incandescent Lamp Co., Fosteria, O.
General Electric Co., Schenectady, N. Y.
Kentucky Electrical Co., Owensboro, Ky.
Lee Electric Co., Baltimore, Md.
Piedmont Electric Co., Asheville, N. C.
Western Electric Co., New York, N. Y.
Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.
- Lands.**
Barr, J. H. C., Philadelphia, Pa.
Fendig & Co., Albert, Brunswick, Ga.
Kimbrough & Co., J. T., Atlanta, Ga.
Nusbaum & Co., S. L., Norfolk, Va.
- Laths. (Expanded Metal.)**
Carroll Portland Cement Co., Charleston, S. C.
Milwaukee Corrugating Co., Milwaukee, Wis.

Lathes. (Machine.)
Greaves, Kline & Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.

Lawn Furniture.
Bulles Iron & Wire Works, J. E., Detroit, Mich.
Bulles & Co., Baltimore, Md.
Dorfer, Baggott & Co., Baltimore, Md.

Leadite.
Leadite Co., The, Philadelphia, Pa.

Lighting Equipment.
Halophane Co., Newark, Ohio.

Lime.
Carroll Portland Cement Co., Charleston, S. C.
Security Cement & Lime Co., Baltimore, Md.
Southern Portland Cement Co., Charleston, S. C.
Newwater Portland Cement Co., Baltimore, Md.

Lime. (Hydrated.)
Security Cement & Lime Co., Baltimore, Md.
Newwater Portland Cement Co., Baltimore, Md.

Lime Kilns and Equipment.
Improved Equipment Co., New York, N. Y.

Limestone Products.
Security Cement & Lime Co., Baltimore, Md.

Liquor Filters.
International Filter Co., Chicago, Ill.

Lithographers. Engravers.
Young & Seiden Co., Baltimore, Md.

Lumps.
Lumps Realization Co., Chicago, Ill.

Luckers. (Metal.)
Selig Metal Ceiling Mfg. Co., S., Pittsburg, Pa.

Locomotives.
INDUSTRIAL.
American Locomotive Co., New York, N. Y.
Baldwin Locomotive Works, The, Philadelphia, Pa.
Bryer Machine Co., John F., Ravenna, O.
Climax Mfg. Co., Corry, Pa.
Davenport Locomotive Works, Davenport, Ia.
Hawley Locomotive Works, Erie, Pa.
Jeffrey Mfg. Co., Columbus, O.
Lima Locomotive & Machine Co., Lima, O.
Males Co., Cincinnati, O.
Porter Co., H. K., Pittsburg, Pa.
Vulcan Iron Works, Wilkes-Barre, Pa.

RAILWAY.
American Locomotive Co., New York, N. Y.
Baldwin Locomotive Works, The, Philadelphia, Pa.
Lima Locomotive & Machine Co., Lima, O.
Males Co., Cincinnati, O.
Vulcan Iron Works, Wilkes-Barre, Pa.

Looms and Weaving Machinery.
Dwyer Co., Hopedale, Mass.
Mass Machine Works, Taunton, Mass.

Lubricants.
Albany Lubricating Co., New York, N. Y.

Lumber.
Industrial Lumber Co., Elizabeth, La.
Mason & Felton Lumber Co., Macon, Ga.
Lumber. (Heavy Construction, Pitch Pine, etc.)
Mason & Felton Lumber Co., Macon, Ga.
Mason & Felton Lumber & Creosote Co., Texarkana, Ark.
Hoyt & Co., S. E., Gulfport, Miss.

Lumber. (Yellow Pine.)
Industrial Lumber Co., Elizabeth, La.

Lumber Buggies.
Sole Steam Feed Works, Meridian, Miss.

Lumber Stackers.
Sole Steam Feed Works, Meridian, Miss.

Machinery. (Special.)
Bliss Co., E. W., Brooklyn, N. Y.
Elliott, Lewis & Co., Alpena, Mich.
Lester & Co., Charles, Brooklyn, N. Y.
Old City Boiler Co., Oil City, Pa.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Rogers & Sons, F. & M., Weyersford, Pa.
Stratton & Bragg Co., Petersburg, Va.
Universal Telegraphic Co., Baltimore, Md.

Machinery and Supplies. (New and Second-Hand Bargains.)
Bostin Iron & Metal Co., Baltimore, Md.
Brown, Jan. H., Brooklyn, N. Y.
Chicago House Wrecking Co., Chicago, Ill.
Cleveland Belling & Machinery Co., Cleveland, O.
Dunbar Railway Equipment Co., Chicago, Ill.
Dunbar & Son, New York, N. Y.
Elliott's Sons Co., Henry A., Philadelphia, Pa.
Hale Bros. & Co., New York, N. Y.
Kincheloe, H., Pittsburgh, Pa.
Latham, Charles T., Birmingham, Ala.
Levene & Co., E., Philadelphia, Pa.
Ludlow, W. J., New York, N. Y.
Lodge & Shipley Machine Tool Co., Cincinnati, O.
Mason Metal & Supply Co., New York, N. Y.
Matheson Iron & Metal Co., St. Louis, Mo.
Pharmaceutical Engineering Co., Chicago, Ill.
Pickett Co., Inc., H. W., Philadelphia, Pa.
Pipe & Contractors' Supply Co., New York, N. Y.
Pittsburg Mch. & Equip. Co., Pittsburg, Pa.
Proctor Tool & Supply Co., New York, N. Y.
Randle Machinery Co., Cincinnati, O.
Rend Co., Howard W., Philadelphia, Pa.
Rumel, Frank, Philadelphia, Pa.
Seyfert's Sons, Inc., L. F., Philadelphia, Pa.
Southern Supply Co., Norfolk, Va.
Tampa Machinery Exchange, Tampa, Fla.
Texas Supply Co., Beaumont, Tex.
Wiley, Frank, Philadelphia, Pa.
Walter Co., Herman L., Philadelphia, Pa.
Wardley, Thomas, Philadelphia, Pa.

Machine Tools.
Greaves, Kline & Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.

Machinists. (Engineers.)
American Mch. & Mfg. Co., Charlotte, N. C.
Buckley Iron Works, Inc., Roanoke, Va.
Stratton & Bragg Co., Petersburg, Va.
Universal Telegraphic Co., Baltimore, Md.

Magnesia Materials.
John-Manville Co., H. W., New York, N. Y.

Magnesite. (Dead Burned.)
Manning-Walker Refractories Co., Pittsburg, Pa.

Magnet Electro. (For Cottonseed, Linseed and Others.)
Wale Electro Magnet Co., Memphis, Tenn.

Magnetic Separators.
Farnes Co., J. W., Philadelphia, Pa.

Mail Chutes.
Gutter Mail Chute Co., Rochester, N. Y.

Mantels. (Wooden.)
Rothman Mantel Co., W. J., Memphis, Tenn.

Marble Work. (Interior.)
Dagostin & Angelini Bros., Montgomery, Ala.
Southern Mosaic Tile Co., Birmingham, Ala.

Masonry Dams.
Multiple Arch Hydraulic Const. Co., Ltd., Spar-tanburg, S. C.

Mechanical Draft.
American Blower Co., Detroit, Mich.
Buffalo Steam Pump Co., Buffalo, N. Y.
Sturtevant Co., B. F., Hyde Park, Mass.

Metal Ceilings. [See Ceilings, Metal.]

Metallics.
North Amer. Metallics Co., Long Island City, N. Y.

Metal Culverts. [See Culverts.] (Corrugated Metal.)

Metal Polish.
Hoffman, Geo. W., Indianapolis, Ind.

Metal Shingles.
Burris & Co., John T., Anderson, S. C.
Chattanooga Rfg. & Fdry. Co., Chattanooga, Tenn.
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Cortright Metal Roofing Co., Philadelphia, Pa.
Edwards Manufacturing Co., Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.

Metal Window Frames and Sashes.
Detroit Steel Products Co., Detroit, Mich.
Edwards Mfg. Co., The, Cincinnati, O.
Keighley Metal Cell. & Mfg. Co., S., Pittsburg, Pa.
United States Metal Products Co., New York, N. Y.
Volkmann & Co., Chicago, Ill.

Metal Work. (Stamped and Embossed Hotel Checks, Key Tags, etc.)
American Railway Supply Co., New York, N. Y.

Metal-Working Machinery.
Bertsch & Co., Cambridge City, Ind.
Bliss Co., E. W., Brooklyn, N. Y.
Gibbs Machinery Co., Columbia, S. C.
Lester & Co., Charles, Brooklyn, N. Y.
Price Machinery Co., S. M., Norfolk, Va.
Rogers & Sons, F. & M., Weyersford, Pa.

Micrometers, Calipers, Etc.
Starratt Co., L. S., Athol, Mass.

Milk Filters. (Liquor, Milk, etc.)
International Filter Co., Chicago, Ill.

Mill Engineers and Architects.
Lockwood, Greene & Co., Boston, Mass.
Sizirre, J. E., Greenville, S. C.

Mill Supplies.
Appomattox Iron Wks. & Sup. Co., Petersburg, Va.
Bailey-Lobby Co., Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Gainesville Iron Works, Gainesville, Ga.
Greenwald Co., I. & E., Cincinnati, O.
Lindsey, J. L., Inc., Richmond, Va.
Lombard Iron Works, Augusta, Ga.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Mecklenburg Iron Works, Charlotte, N. C.
Nordyke & Marmon Co., Indianapolis, Ind.
Salem Foundry & Machine Works, Salem, Va.
Smith-Courtney Co., Richmond, Va.
Starr Co., B. F., Baltimore, Md.
Stratton & Bragg Co., Petersburg, Va.
Ward-Becke Co., Washington, D. C.
Wolf Co., Chambersburg, Pa.

Mining Machinery. (Gold, Copper, Plate, etc.)
Bartlett & Snow Co., C. O., Cleveland, O.
Jeffrey Mfg. Co., Columbus, O.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
Mecklenburg Iron Works, Charlotte, N. C.
Power & Mining Machinery Co., Cudahy, Wis.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.

Mixer Machinery.
Smith Co., T. L., Atlanta, Ga.

Mixing Machinery.
Dunning, W. D., Syracuse, N. Y.
Lynn-Superior Co., The, Cincinnati, O.

Mortar Colors.
Chattanooga Paint Co., Chattanooga, Tenn.

Mouldings, Casings, etc.
Mason & Felton Lumber Co., Macon, Ga.

Nails and Spikes.
American Steel & Wire Co., Chicago, Ill.
Hoffman & Co., R. C., Baltimore, Md.
Republic Iron & Steel Co., Youngstown, O.
West Virginia Rail Co., The, Huntington, W. Va.
Youngstown Sheet & Tube Co., Youngstown, O.

Nitre Pots, Etc.
Pratt Engineering & Mach. Co., Atlanta, Ga.

Nuts. [See Bolts, Nuts, Rivets, etc.]

Office Furniture.
Rose & Thompson, Baltimore, Md.

Oils. (Lubricating, etc.)
Albany Lubricating Co., New York, N. Y.
Borne-Schrymer Co., New York, N. Y.
Galena Signal Oil Co., Franklin, Pa.
Gulf Refining Co., Pittsburg, Pa.
Robinson & Son Co., Wm. C., Baltimore, Md.
Texas Co., The, New York, N. Y.

Oil-Burning Appliances.
Petroleum Iron Works Co., Sharon, Pa.

Oil Cans.
Wall Mfg. Supply Co., F., Allegheny, Pa.

Oil Engines. [See Engines (Oil).]

Oil Separators.
Stewart Heater Co., Buffalo, N. Y.

Oil Stones.
Carborundum Co., Niagara Falls, N. Y.
Norton Co., Worcester, Mass.

Oil-Well Machinery.
Keystone Steam Well Mach. Co., Beaver Falls, Pa.
Williams Bros., Itasca, N. Y.

Ore Briquetting Machinery.
Devillers, Robert, Brooklyn, N. Y.

Ornamental Iron Work.
Belmont Iron Works, Inc., Philadelphia, Pa.
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Chattanooga Iron & Wire Wks., Chattanooga, Tenn.
Chesapeake Iron Works, Baltimore, Md.
Dow Wire Works Co., Louisville, Ky.
Ohio Elevator & Machine Co., The, Columbus, O.
Roanoke Iron Works, Inc., Roanoke, Va.
Schreiber & Sons Co., The, L., Cincinnati, O.
Snead Architectural Iron Works, Louisville, Ky.
Southern Wire & Iron Mfg. Co., Dallas, Tex.

Packing. (Asbestos, Metallic, Rubber, Leather, etc.)
American Hubs Packing Co., New York, N. Y.
Jenkins Bros., New York, N. Y.
John-Manville Co., H. W., New York, N. Y.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Power Specialty Co., New York, N. Y.

Paint. (Bridge.)
Detroit Graphite Co., Detroit, Mich.
Dixon Crucible Co., Jersey City, N. J.
Linsine Co., Philadelphia, Pa.
National Roofing Co., Tonawanda, N. Y.

Paints. (Cold Water.)
Wilhelm Co., A., New York, N. Y.

Paint. (Metal Preservative.)
Detroit Graphite Co., Detroit, Mich.
Linsine Co., Philadelphia, Pa.
National Roofing Co., Tonawanda, N. Y.
Wilhelm Co., A., New York, N. Y.

Paint. (Roofing, Building, etc.)
Armstrong Mfg. Co., The, Richmond, Va.
Bird & Son, F. W., East Walpole, Mass.
Cameron & Barkley Co., Charleston, S. C.
Carroll Portland Cement Co., Charleston, S. C.
Chattanooga Paint Co., Chattanooga, Tenn.
Detroit Graphite Co., Detroit, Mich.
Dixon Crucible Co., Jersey City, N. J.
Hidden Varnish Co., Cleveland, O.
Linsine Co., Philadelphia, Pa.
National Roofing Co., Tonawanda, N. Y.
Standard Paint Co., New York, N. Y.
Wilhelm Co., A., New York, N. Y.

Painting. (Contractors for Bridges, Build-ings, etc.)
Dinisco & Bro., A., Pittsburg, Pa.

Paint-making Machinery.
Campbell, F. F., Philadelphia, Pa.
Lynn Superior Co., The, Cincinnati, O.

Paper. (Roofing, Building, Sheathing, etc.)
Armstrong Mfg. Co., Richmond, Va.
Barrett Mfg. Co., Philadelphia, Pa.
Bird & Son, F. W., East Walpole, Mass.
Cameron & Barkley Co., Charleston, S. C.
Southeastern Lime & Cement Co., Charleston, S. C.
Standard Roofing Co., Tulsa, Okla.

Passenger Coach Steps. (Extension.)
Blake Car Step Works, Charlotte, N. C.

Patent Attorneys.
Brown, Eugene C., Washington, D. C.
Chandler & Co., H. Ellis, Washington, D. C.
Chandler & Chandler, Washington, D. C.
Evans & Co., Victor J., Washington, D. C.
Owen, Richard B., Washington, D. C.

Patterns.
Roanoke Iron Works, Inc., Roanoke, Va.

Pavement Filler.
Barrett Mfg. Co., Philadelphia, Pa.

Paving. (Contractors for Creosoted Wood Block.)
Creosoted Wood Block Pav. Co., New Orleans, La.

Paving Blocks. (Granite.)
Harris Granite Quarries Co., Salisbury, N. C.

Paving Blocks. (Wood Creosote-Resinate.)
Gulfport Creosoting Co., Gulfport, Miss.
Southern Wood Preserving Co., Atlanta, Ga.
U. S. Wood Preserving Co., New York, N. Y.

Paving Brick.
Carlyle Paving Brick Co., Portsmouth, O.
Copeland-Ingalls Shale Brick Co., Birm'gh'm, Ala.

Paving Machinery. (Bituminous Materials.)
Smith Co., T. L., Atlanta, Ga.

Perforated Metal.
Caldwell & Son, H. W., Chicago, Ill.
Erdle Perforating Co., Rochester, N. Y.
Hendrick Mfg. Co., The, Carbondale, Pa.
Mundt & Sons, Charles, Jersey City, N. J.

Perspectives. (Water Color, for Architects.)
Alger & Smith, Atlanta, Ga.

Petroleum Refiners.
Gulf Refining Co., Pittsburg, Pa.
Standard Oil Co., Cincinnati, O.

Phosphate Machinery.
Aising Engineering Co., J. R., New York, N. Y.
American Process Co., New York, N. Y.
Bailey-Lobby Co., The, Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Link-Belt Co., Nictown (Philadelphia), Pa.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
Pratt Engineering & Mach. Co., Atlanta, Ga.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Talk & Murdock Iron Works, Charleston, S. C.
Walker & Elliott, Wilmington, Del.

Phosphor-Bronze. (Wire Rods, Sheets.)
Phosphor-Bronze Smelting Co., Philadelphia, Pa.

Photo-Engravers.
Baltimore Maryland Engr. Co., Baltimore, Md.

Pig Iron.
Alabama Con. Coal & Iron Co., Birmingham, Ala.
La Belle Iron Works, Steubenville, O.
Republic Iron & Steel Co., Youngstown, O.
Rogers, Brown & Co., Cincinnati, O.
Tennessee Coal, Iron & R. R. Co., Birm'gh'm, Ala.

Pile Drivers.
Bucyrus Co., Milwaukee, Wis.
Vulcan Iron Works, Chicago, Ill.

Piling. (Creosoted.)
Gulfport Creosoting Co., Gulfport, Miss.
Intern'l Creosoting & Const. Co., Galveston, Tex.
Southern Creosoting Co., Ltd., Biddell, La.

Pillow Blocks.
Caldwell Co., Inc., W. E., Louisville, Ky.
Dodge Manufacturing Co., Milwaukee, Ind.
Golden's Foundry & Machine Co., Columbus, Ga.

Pine Tar.
Atlantic Turpentine & Refin'g Co., Savannah, Ga.

Pipe. (Cast Iron.)
American Cast Iron Pipe Co., Birmingham, Ala.
American Pipe & Construction Co., Phila., Pa.
Giamorgan Pipe & Foundry Co., Lynchburg, Va.
McWane Pipe Works, Lynchburg, Va.
U. S. Cast Iron Pipe & Fdry. Co., New York, N. Y.
Wood & Co., R. D., Philadelphia, Pa.

Pipe. (Coll.)
Columbus Iron Works Co., Columbus, Ga.
Frick Co., The, Waynesboro, Pa.
National Pipe Bending Co., New Haven, Conn.
Whitlock Coll Pipe Co., Hartford, Conn.
York Mfg. Co., York, Pa.

Pipe. (Corrugated Culvert.)
American Rolling Mill Co., Middletown, O.
Canton Culvert Co., The, Canton, O.
Dixie Culvert & Metal Co., Atlanta, Ga.
Galton Iron Works Co., Galton, O.
Harry Steel Co., O. E., St. Louis, Mo.
Kentucky Culvert Mfg. Co., Buechel, Ky.
North Carolina Metal Culv. Co., Greensboro, N. C.
Virginia Metal Culvert Co., Roanoke, Va.
Virginia Railway Supply Co., Norfolk, Va.

Pipe. (Riveted.)
Aberdeth & Root Mfg. Co., Newburgh, N. Y.
Reeler Co., E., Williamsport, Pa.
Petroleum Iron Works Co., Sharon, Pa.
Ruemell-Dawley Mfg. Co., St. Louis, Mo.

Pipe. (Spiral Riveted.)
Aberdeth & Root Mfg. Co., Newburgh, N. Y.
American Spiral Pipe Works, Chicago, Ill.

Pipe. (Wood.)
Wyckoff & Son Co., A., Elmira, N. Y.

Pipe. (Wrought.)
La Belle Iron Works, Steubenville, O.
National Tube Co., Pittsburg, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.

Pipe Bends.
Columbus Iron Works Co., Columbus, Ga.
Whitlock Coll Pipe Co., Hartford, Conn.

Pipe Covering. (Steam.)
John-Manville Co., H. W., New York, N. Y.
Southern Pipe Covering Co., Inc., Richmond, Va.
Wyckoff & Son Co., A., Elmira, N. Y.

Pipe Cutting and Threading Machinery.
Saunders' Sons, D., Yonkers, N. Y.

Pipe Fittings.
American Cast Iron Pipe Co., Birmingham, Ala.
Columbus Iron Works Co., Columbus, Ga.
York Mfg. Co., York, Pa.

Pipe Jointing. (Gas and Water Main.)
Leadite Co., Inc., Philadelphia, Pa.

Pipe Locator.
Modern Iron Works, Quincy, Ill.

Pipe Unions and Joints.
Dart Mfg. Co., E. M., Providence, R. I.
National Tube Co., Pittsburg, Pa.
Whitlock Coll Pipe Co., Hartford, Conn.

Pipe Wrenches and Cutters.
Saunders' Sons, D., Yonkers, N. Y.

Pitch.
Barrett Mfg. Co., Philadelphia, Pa.

Planers. (Metal.)
Manning, Maxwell & Moore, Inc., New York, N. Y.

Planing Mill Work.
Mason & Felton Lumber Co., Macon, Ga.

Plaster of Paris.
King & Co., J. B., New York, N. Y.

Plaster.
Security Cement & Lime Co., Baltimore, Md.

Plaster. (Asbestos Cement, Plaster of Paris.)
King & Co., J. B., New York, N. Y.

Plaster Boards.
Hercules Plaster Board Co., Hampton, Va.
King & Co., J. B., New York, N. Y.

Plaster Machinery.
Bartlett & Snow Co., C. O., Cleveland, O.

Plates.
Cincinnati Iron & Steel Co., Cincinnati, O.
Wood Iron & Steel Co., Alan, Philadelphia, Pa.

Plugs. (Wall.)
Wicks Mfg. Co., Milton O., Glen Cove, N. Y.

Pneumatic Tools. [See Tools—Pneumatic.]

Polishing Machinery. (Wheels and Blocks.)
Abrasive Material Co., Philadelphia, Pa.
Carborundum Co., Niagara Falls, N. Y.
Vitrified Wheel Co., Westfield, Mass.

Power Transmission Machinery.
Bailey-Lobby Co., Charleston, S. C.
Brown Co., A. & F., New York, N. Y.
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Crescon Co., Geo. V., Philadelphia, Pa.
Dayton Globe Iron Works Co., Dayton, O.
Dodge Manufacturing Co., Milwaukee, Ind.
Golden's Foundry & Machine Co., Columbus, Ga.
Greenwald Co., I. & E., Cincinnati, O.
Jeffrey Mfg. Co., Columbus, O.
Jones & Laughlin Steel Co., Pittsburg, Pa.
Lane Mfg. Co., Montpelier, Vt.
Lindsey, J. L., Inc., Richmond, Va.
Link-Belt Co., Nictown (Philadelphia), Pa.
Morse Chain Co., Itasca, N. Y.
Nordyke & Marmon Co., Indianapolis, Ind.
Poole Engineering & Machine Co., Baltimore, Md.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Price Machinery Co., B. M., Norfolk, Va.
Schubert's Sons Co., J. S., Macon, Ga.
Wolf Co., The, Chambersburg, Pa.
Wood's Sons Co., T. B., Chambersburg, Pa.

Presses. (Baling, Cottonseed Oil, etc., Hydraulic and Power.)
Boomer & Boechert Press Co., Syracuse, N. Y.
Caldwell Machine Co., Richmond, Va.
Continental Gin Co., Birmingham, Ala.
Gibbs Machinery Co., Columbus, S. C.

Presses. (Stamping.)
Bliss Co., E. W., Brooklyn, N. Y.
Lester & Co., Charles, Brooklyn, N. Y.

Preventive for Sap Stain.
Church & Dwight Co., New York, N. Y.

Printers. (Book, Catalog, Job, etc.)
Fleet-McGinley Co., Baltimore, Md.

Promoters.
Anastasi Realization Co., Chicago, Ill.
Electric Bond & Share Co., New York.

Protector Steel. (Concrete Curb, Steps, etc.)
Steel Protected Concrete Co., Philadelphia, Pa.

Pulleys. (Friction Clutch.)
Brown Co., A. & F., New York, N. Y.
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Dodge Manufacturing Co., Milwaukee, Ind.
Foule Engineering & Machine Co., Baltimore, Md.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Ginsclair-Scott Co., Baltimore, Md.
Wood's Sons Co., T. B., Chambersburg, Pa.

STREET SPLIT.
American Pulley Co., Philadelphia, Pa.
Dodge Manufacturing Co., Milwaukee, Ind.

WOOD SPLIT.
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Dodge Manufacturing Co., Milwaukee, Ind.
Lane Mfg. Co., Montpelier, Vt.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Saginaw Mfg. Co., Saginaw, Mich.
Salem Foundry & Machine Works, Salem, Va.

Pulleys, Shafting and Hangers.
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Dodge Manufacturing Co., Milwaukee, Ind.
Golden's Foundry & Machine Co., Columbus, Ga.
Greenwald Co., I. & E., Cincinnati, O.
Jeffrey Mfg. Co., Columbus, O.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Lane Mfg. Co., Montpelier, Vt.
Link-Belt Co., Nictown (Philadelphia), Pa.
Mordyke & Marmon Co., Indianapolis, Ind.
Poole Engineering & Machine Co., Baltimore, Md.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Standard Roller Bearing Co., Philadelphia, Pa.
Woods' Sons Co., T. B., Chambersburg, Pa.

Pumps. (Centrifugal.)
Alberger Pump Co., New York, N. Y.
Buffalo Steam Pump Co., Buffalo, N. Y.
De Laval Steam Turbine Co., Trenton, N. J.
Emerson Steam Pump Co., Alexandria, Va.
Eric Pump & Engine Works, Erie, Pa.
Goulds Mfg. Co., Seneca Falls, N. Y.
Hayton Pump Co., Quincy, Ill.
Morris Machine Works, Baldwinville, N. Y.
Wood & Co., R. D., Philadelphia, Pa.
Worthington, H. R., New York, N. Y.

Pumps. (Deep Well.)
McGowan Co., John H., Cincinnati, O.

Pumps. (Hydraulic.)
Buffalo Steam Pump Co., Buffalo, N. Y.
Cardwell Machine Co., Richmond, Va.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Emerson Steam Pump Co., Alexandria, Va.
Eric Pump & Engine Works, Erie, Pa.
Goulds Mfg. Co., Seneca Falls, N. Y.
Worthington, H. R., New York, N. Y.

Pumps. (Lift and Force.)
Goulds Mfg. Co., Seneca Falls, N. Y.
Ingersoll-Rand Co., New York, N. Y.

Pumps. (Odorous and Excavating.)
Goulds Mfg. Co., Seneca Falls, N. Y.

Pumps. (Pneumatic.)
Ingersoll-Rand Co., New York, N. Y.

Pumps. (Boiler Feed.)
Alberger Pump Co., New York, N. Y.
Emerson Steam Pump Wks., A. S., New York, N. Y.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Goulds Mfg. Co., Seneca Falls, N. Y.
McGowan Co., John H., Cincinnati, O.
Moffatt Machinery Mfg. Co., Charlotte, N. C.
Murray Iron Works Co., Burlington, Ia.
Myers & Bros., F. E., Ashland, O.
Union Steam Pump Co., Battle Creek, Mich.
Worthington, H. R., New York, N. Y.

Pumps. (Rotary.)
Goulds Mfg. Co., Seneca Falls, N. Y.

Pumps. (Steam.)
Blakelee Mfg. Co., Du Quoin, Ill.
Buffalo Steam Pump Co., Buffalo, N. Y.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Cameron & Barkley Co., Charleston, S. C.
Cook Well Co., The, St. Louis, Mo.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Dean Steam Pump Co., Holyoke, Mass.
Gardner Governor Co., Quincy, Ill.
Gibbs Machinery Co., Columbia, S. C.
Goulds Mfg. Co., Seneca Falls, N. Y.
Hooven, Owen, Reutachler Co., Hamilton, O.
Keystone Pump & Well Engine Co., Beaver Falls, Pa.
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
McGowan Co., John H., Cincinnati, O.
Murray Iron Works Co., Burlington, Ia.
Price Machinery Co., S. M., Norfolk, Va.
Sydney Pump & Well Co., Richmond, Va.
Union Steam Pump Co., Battle Creek, Mich.
Worthington, H. R., New York, N. Y.

Pumps. (Trench.)
Goulds Mfg. Co., Seneca Falls, N. Y.

Pumps. (Vacuum.)
Alberger Pump Co., New York, N. Y.

Pumps. (Water-works.)
McGowan Co., John H., Cincinnati, O.

Pumping Machinery.
Allis-Chalmers Co., Milwaukee, Wis.
Blakelee Mfg. Co., Du Quoin, Ill.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Cook Well Co., The, St. Louis, Mo.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Dean Steam Pump Co., Holyoke, Mass.
Denning Co., Salem, O.
Eric Pump & Engine Works, Erie, Pa.
Fairbanks, Morse & Co., Chicago, Ill.
Goulds Mfg. Co., Seneca Falls, N. Y.
Hooven, Owen, Reutachler Co., Hamilton, O.
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
McGowan Co., John H., Cincinnati, O.
Moffatt Machinery Mfg. Co., Charlotte, N. C.
Morris Machine Works, Baldwinville, N. Y.
Myers & Bros., F. E., Ashland, O.
Sydney Pump & Well Co., Richmond, Va.
Union Steam Pump Co., Battle Creek, Mich.
Wood & Co., R. D., Philadelphia, Pa.
Worthington, H. R., New York, N. Y.

Punching and Shearing Machinery.
Bertch & Co., Cambridge City, Ind.
Bliss Co., E. W., Brooklyn, N. Y.
Boyersford Foundry & Mach. Co., Boyersford, Pa.

Pyrites Burners.
Pratt Engineering & Mach. Co., Atlanta, Ga.

Quarrying and Stonecutting Machinery.
Ingersoll-Rand Co., New York, N. Y.

Railings, Grilles, etc. (Brass.)
McKenna Bros. Brass Co., Pittsburgh, Pa.

Railroads. (Agricultural and Industrial Opportunities.) (See Industrial, Agricultural and Commercial Opportunities.)

Railroad Equipment and Supplies. (New and Second Hand.)

American Frog & Switch Co., Hamilton, O.
American Locomotive Co., New York, N. Y.
American Valve & Meter Co., Cincinnati, O.
Bailey-Lebby Co., The, Charleston, S. C.
Baldwin Equipment & Supply Co., Chicago, Ill.
Benjamin Equip. Co., Harry, St. Louis, Mo.
Birmingham Rail & Loco. Co., Birmingham, Ala.
Boston Iron & Metal Co., Baltimore, Md.
Cincinnati Frog & Switch Co., Cincinnati, O.
Foster Co., L. B., Pittsburgh, Pa.
Georgia Car & Locomotive Co., Atlanta, Ga.
Hoffman & Co., R. C., Baltimore, Md.
Indiana Steel & Iron Co., Pittsburgh, Pa.
Kilby Frog & Switch Co., Birmingham, Ala.
MacLeary, J. H., Suffolk, Va.
Males Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Maryland Equipment & Supply Co., Baltimore, Md.
Mathes Iron & Metal Co., G. St. Louis, Mo.
May & Turner Co., Atlanta, Ga.
National Iron & Steel Co., Houston, Tex.
Newhall Eng. Co., Geo. M., Philadelphia, Pa.
Pickett Co., Inc., W. W., Philadelphia, Pa.
Q & C Co., New York, N. Y.
Read Co., Howard W., Philadelphia, Pa.
Robinson & Orr, Pittsburgh, Pa.
Sherwood, E. C., New York, N. Y.
Smith-Courtney Co., Richmond, Va.
Southern Iron & Equipment Co., Atlanta, Ga.
Southern Supply Co., Norfolk, Va.
Steel Rail Supply Co., The, New York, N. Y.
United States Rail Co., Cumberland, Md.
Vulcan Iron Works, Wilkes-Barre, Pa.
Weir Frog Co., Cincinnati, O.
West Virginia Rail Co., The, Huntington, W. Va.
Wilson & Co., E. H., Philadelphia, Pa.
Zelicker Supply Co., Walter A., St. Louis, Mo.

Railroad Frogs and Switches.

American Frog & Switch Co., Hamilton, O.
Cincinnati Frog & Switch Co., Cincinnati, O.
Kilby Frog & Switch Co., Birmingham, Ala.
Mathes Iron & Metal Co., G. St. Louis, Mo.
May & Turner Co., Atlanta, Ga.
Robinson & Orr, Pittsburgh, Pa.
Sweet's Steel Co., Williamsport, Pa.
Weir Frog Co., Cincinnati, O.

Railroad Tie. (Reinforced Concrete.)

Universal Concrete Tie Co., New Orleans, La.

Rails. (Steel.)

Baldwin Equipment & Supply Co., Chicago, Ill.
Carnegie Steel Co., Pittsburgh, Pa.
Foster Co., L. B., Pittsburgh, Pa.
Franklin, J. E., Atlanta, Ga.
Hoffman & Co., R. C., Baltimore, Md.
Hyde Bros. & Co., Pittsburgh, Pa.
Indiana Steel & Iron Co., Pittsburgh, Pa.
Levin & Co., Henry, Philadelphia, Pa.
MacLeary, J. H., Suffolk, Va.
Mathes Iron & Metal Co., G. St. Louis, Mo.
May & Turner Co., Atlanta, Ga.
National Iron & Steel Co., Houston, Tex.
Newhall Eng. Co., Geo. M., Philadelphia, Pa.
Republic Iron & Youngstown, O.
Robinson & Orr, Pittsburgh, Pa.
Sherwood, E. C., New York, N. Y.
Southern Iron & Equipment Co., Atlanta, Ga.
Steel Rail Supply Co., The, New York, N. Y.
Sweet's Steel Co., Williamsport, Pa.
Tennessee Coal & R. R. Co., B'gh'm, Ala.
United States Rail Co., Cumberland, Md.
West Virginia Rail Co., The, Huntington, W. Va.
Wilson & Co., E. H., Philadelphia, Pa.
Zelicker Supply Co., Walter A., St. Louis, Mo.

Rail Braces, Crossings, etc. (See R. R. Frogs and Switches.)

Rail Joints.
Q & C Co., New York, N. Y.

Railways. (Industrial.)
Chase Filby & Mfg. Co., Columbus, O.
Hunt Co., C. W., West New Brighton, N. Y.
Link-Belt Co., Nictown (Philadelphia), Pa.

Rams. (Hydraulic.) (See Hydraulic Rams.)

Reamers.
Morris Twist Drill & Mch. Co., New Bedford, Mass.

Reflectors.
Holophane Co., Newark, Ohio.

Refrigerating Machinery and Supplies.
American Huhn Packing Co., New York, N. Y.

Reinforcing Bars.
Carnegie Steel Co., Pittsburgh, Pa.
Concrete Steel Co., New York, N. Y.
Concrete Steel Engineering Co., New York, N. Y.
Franklin Steel Co., Franklin, Pa.

Repairing. (Power Plants.)
Strickland Mch. Co., Richmond, Va.

Riveters. (Pneumatic.)
Chicago Pneumatic Tool Co., Chicago, Ill.
Independent Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.

Road Machinery.
Austin-Western Co., Ltd., The, Chicago, Ill.
Blount, C. F., Atlanta, Ga.
Buffalo Steam Roller Co., Buffalo, N. Y.
Case Threshing Mach. Co., J. I., Racine, Wis.
Gallon Iron Works Co., Gallon, O.
Ironworks Iron Works, Buffalo, N. Y.
Kelly Springfield Road Roller Co., Springfield, O.
Syracuse Chilled Plow Co., Syracuse, N. Y.
Universal Road Mch. Co., Kingston, N. Y.
Western Wheel Scraper Co., Aurora, Ill.

Roadmaking Materials.
Standard Oil Co., Inc., Road Oil Dept.
Texas Co., The, New York, N. Y.

Road Roller. (Steam.)
Austin-Western Co., Ltd., The, Chicago, Ill.

Road Threshing Mach. Co., J. I., Racine, Wis.
Case Threshing Mach. Co., J. I., Racine, Wis.
Ironworks Iron Works, Buffalo, N. Y.
Kelly Springfield Road Roller Co., Springfield, O.
Universal Road Mch. Co., Kingston, N. Y.

Road Plows.
Case Threshing Mach. Co., J. I., Racine, Wis.
Syracuse Chilled Plow Co., Syracuse, N. Y.

Road Preservative.
Gulf Refining Co., Pittsburgh, Pa.
Standard Oil Co., Inc., Road Oil Dept.
Texas Co., The, New York, N. Y.

Rock Crushers. (See Crushers, Rock.)

Roll Grinding and Conveying. (Flour Mills.)
Veatch & Co., L. R., Louisville, Ky.

Roll Metal Shapes. (For Building Material Manufacturers.)
United States Metal Products Co., New York, N. Y.

Rolls. (Bending and Straightening.)
Bertch & Co., Cambridge City, Ind.

Roofers' and Tanners' Supplies.
Merchant & Evans Co., Philadelphia, Pa.

Roofing. (Contractors for Laying.)
Dinaco & Bro., A., Pittsburgh, Pa.

Roofing. (Felt, Tar, Asbestos, Asphalt, Tin, etc.)
Allen, Herbert F. L., Washington, D. C.
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Armstrong Mfg. Co., Richmond, Va.
Asphalt Ready Roofing Co., New York, N. Y.
Barber Asphalt Paving Co., Philadelphia, Pa.
Barrett Mfg. Co., Philadelphia, Pa.
Bird & Son, F. W., East Walpole, Mass.
Cameron & Barkley Co., Charleston, S. C.
Carolina Portland Cement Co., Charleston, S. C.
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Johns-Manville Co., H. W., New York, N. Y.
National Roofing Co., Tonawanda, N. Y.
Standard Paint Co., New York, N. Y.
Standard Roofing Co., Tulsa, Okla.

Roofing. (Cement.)
Carey Mfg. Co., Philip, Cincinnati, O.

Roofing. (Metal Shingles.) (See Shingles, Metal.)

Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Cortright Metal Roofing Co., Philadelphia, Pa.
Edwards Mfg. Co., The, Cincinnati, O.
Milwaukee Corrugating Co., Milwaukee, Wis.

Roofing. (Slate.)
East Bangor Consol. Slate Co., East Bangor, Pa.
East & Sons, John, New York, N. Y.
Genuine Bangor Slate Co., Easton, Pa.
Hower, J. K., Stratford, Pa.
Johnson, E. J., New York, N. Y.

Roofing Tile.
National Roofing Tile Co., Lima, O.

Roofing and Siding. (Bird Sand and Chipped Slate Surfaced.)
Birmingham & Seaman Co., Chicago, Ill.

Roofing and Siding. (Flexible Cement, Bur-lap Inserted.)
Birmingham & Seaman Co., Chicago, Ill.

Roofing and Siding. (Metal.)
American Rolling Mill Co., Middletown, O.
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Cortright Metal Roofing Co., Philadelphia, Pa.
Edwards Mfg. Co., The, Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.
Milwaukee Corrugating Co., Milwaukee, Wis.
New Orleans Rfg. & Metal Wks., New Orleans, La.
Tennessee Metal Culvert Co., Nashville, Tenn.
Youngstown Sheet & Tube Co., Youngstown, O.

Rope.
American Mfg. Co., New York, N. Y.
Broderick & Bascom Rope Co., St. Louis, Mo.
Columbian Rope Co., Auburn, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
Turner Co., J. Spencer, New York, N. Y.
Whitlock Cordage Co., New York, N. Y.

Rope. (Transmission and Hoisting.)
American Mfg. Co., New York, N. Y.
American Steel & Wire Co., Chicago, Ill.
Broderick & Bascom Rope Co., St. Louis, Mo.
Caldwell Co., Inc., W. E., Louisville, Ky.
Columbian Rope Co., Auburn, N. Y.
Hunt Co., C. W., West New Brighton, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
Whitlock Cordage Co., New York, N. Y.
Wood's Sons Co., T. B., Chambersburg, Pa.

Rope Drives.
Brown Co., A. & F., New York, N. Y.
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son, H. W., Chicago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Dodge Manufacturing Co., Milwaukee, Ind.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Wood's Sons Co., T. B., Chambersburg, Pa.

Rope Machinery.
Haskell-Dawes Machine Co., Boston, Mass.

Rubber Goods.
Eureka Fire Hose Mfg. Co., New York, N. Y.
New Jersey Car Sp'g & Rub. Co., Jersey City, N. J.

Rules. (Steel.)
Lufkin Rule Co., The, Saginaw, Mich.
Starrett Co., L. S., Athol, Mass.

Safes and Vaults.
York Safe & Lock Co., York, Pa.

Safety Appliances. (For Elevator.)
Both Elevator Safety Co., Inc., Baltimore, Md.

Sand.
Arundel Sand & Gravel Co., Baltimore, Md.
Kirkpatrick Sand & Cem. Co., Birmingham, Ala.
Lathrop & Co., C. P., Richmond, Va.

Sand Rammers.
Chicago Pneumatic Tool Co., Chicago, Ill.

Sap Stain Preventive.
Church & Dwight Co., New York, N. Y.

Sash Chain.
Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.

Saws.
Gibbs Machinery Co., Columbia, S. C.
Huther Bros. Saw Mfg. Co., Rochester, N. Y.
Smith Machine Co., H. B., Smithville, N. J.
Sydney Pump & Well Co., Richmond, Va.

Saws. (Band.)
Smith Machine Co., H. B., Smithville, N. J.

Saws. (Hack.)
Starrett Co., L. S., Athol, Mass.

Sawmill Dogs.
Soule Steam Feed Works, Meridian, Miss.

Sawmills.
Appomattox Iron Wks. & Sup. Co., Petersburg, Va.
Gainesville Iron Works, Gainesville, Ga.

Sawmill Machinery.
Bailey-Lebby Co., Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Chase Turbine Mfg. Co., Orange, Mass.
Gibbs Machinery Co., Columbia, S. C.
Knight Mfg. Co., Canton, O.
Lane Mfg. Co., Montpelier, Vt.
Mecklenburg Iron Works, Charlotte, N. C.
Price Mch. Co., S. M., Norfolk, Va.
Schiffel's Sons Co., J. S., Macon, Ga.
Southern Engine & Boiler Works, Jackson, Tenn.
Sydney Pump & Well Co., Richmond, Va.
Union Iron Works Co., Selma, Ala.

Saw Sharpeners.
Abrasive Material Co., Philadelphia, Pa.
Carborundum Co., Niagara Falls, N. Y.
Norton Co., Worcester, Mass.
Vitrified Wheel Co., Westfield, Mass.

Saw Sharpeners and Files. (Cotton Gin.)
Carver Cotton Gin Co., Maat Bridgewater, Mass.

Scales.
Howe Scale Co., New York, N. Y.
Rome Scale & Mfg. Co., Rome, Ga.
Standard Scale & Supply Co., Pittsburgh, Pa.

Screening Apparatus.
Walker & Elliott, Wilmington, Del.

Screens. (Fly, Window and Door.)
New Jersey Wire Cloth Co., Trenton, N. J.

Screens. (Mining.)
Cresson Co., Geo. V., Philadelphia, Pa.
Erdle Performing Co., Rochester, N. Y.
Hendrick Mfg. Co., Carbondale, Pa.
Jeffrey Mfg. Co., Columbus, O.
Mundt & Sons, Charles, Jersey City, N. J.
McLennan-Stone Mach. Co., Hollidaysburg, Pa.
New Jersey Wire Cloth Co., Trenton, N. J.
Waterloo Cement Mchry. Co., Waterloo, Iowa.

Sealer and Stamper. (Envelope.)
Commercial Sales & Mfg. Co., Oberlin, O.

Searchlights.
Ft. Wayne Electric Works, Ft. Wayne, Ind.

Separators. (Dust.)
Buffalo Forge Co., Buffalo, N. Y.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Savannah Blow Pipe Co., Savannah, Ga.

Sewer Pipe Machinery.
Taplin-Rice-Clerkin Co., Akron, O.

Sewer Pipe. (Vitrified.)
Rihb Sewer Pipe Co., Macon, Ga.
Cannell Sewer Pipe Co., Cannelton, Ind.
Carolina Portland Cement Co., Charleston, S. C.
Pittsburgh-Buffalo Co., Pittsburgh, Pa.
Pomona Terra-Cotta Co., Pomona, N. C.
Stevens Sons Co., H., Macon, Ga.

Shades.
Holophane Co., Newark, Ohio.

Shafting. (Polished Steel.)
Field & Co., Inc., Philadelphia, Pa.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Republic Iron & Steel Co., Youngstown, O.

Shafting Boxes.
Hyatt Roller Bearing Co., Newark, N. J.

Shafting. (See Pulleys, Shafting and Hangers.)

Shapes. (Rolled Steel, Brass and Bronze.)
United States Metal Products Co., New York, N. Y.

Sharpening Stones.
Norton Co., Worcester, Mass.
Vitrified Wheel Co., Westfield, Mass.

Shears. (Metal.)
Roversford Fry & Mach. Co., Roversford, Pa.

Sheet Brass and Copper.
Hunsey & Co., C. G., Pittsburgh, Pa.
Merchant & Evans Co., Philadelphia, Pa.

Sheet Metal Working Machinery.
Bliss Co., E. W., Brooklyn, N. Y.

Sheet Steel and Iron.
American Rolling Mill Co., Middletown, O.
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Cincinnati Iron & Steel Co., Cincinnati, O.
La Belle Iron Works, Steubenville, O.
Republic Iron & Steel Co., Youngstown, O.
Tennessee Coal & Iron & R. R. Co., B'gh'm, Ala.
Wood Iron & Steel Co., Alan, Philadelphia, Pa.
Youngstown Sheet & Tube Co., The, Youngstown, O.

Shingles. (Metal.)
Burris & Co., John T., Anderson, S. C.
Carolina Portland Cement Co., Charleston, S. C.
Chattanooga Rfg. & Fdry. Co., Chattanooga, Tenn.
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Cortright Metal Roofing Co., Philadelphia, Pa.
Edwards Mfg. Co., Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.
Milwaukee Corrugating Co., Milwaukee, Wis.

Shipping Tags.
Dennison Mfg. Co., Boston, Mass.

Shredders. (Bark, Chip, etc.)
Williams Pat. Crush. & Pul. Co., The, Chicago, Ill.

Shutters. (Iron.)
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Cheapspeake Iron Works, Baltimore, Md.

Shutters. (Steel Rolling.)
Kinneer Mfg. Co., Columbus, O.

Shutters. (Tin Clad.)
Victor Mfg. Co., Newburyport, Mass.

Siding and Roofing. (Bird Sand and Chipped Slate Surfaced.)
Birmingham & Seaman Co., Chicago, Ill.

Signs. (Metal Lithographed.)
Southern On Co., Baltimore, Md.

Signs. (Road, Street, Outdoor, Advt.)
Indestructible Sign Co., Bishopville, S. C.

Skylights and Cornices.
Milwaukee Corrugating Co., Milwaukee, Wis.
New Orleans Rfg. & Metal Wks., New Orleans, La.

Slate Roofing. (See Roofing (Slate).)

Slate. (Structural, Sanitary, etc.)
Carolina Portland Cement Co., Charleston, S. C.
East Bangor Consol. Slate Co., East Bangor, Pa.
Genuine Bangor Slate Co., Easton, Pa.
Hower, J. K., Stratford, Pa.

Slate's Tools.
Galt & Sons, John, New York, N. Y.

Sluice Gates and Appliances.
Coldwell-Wilcox Co., Newburgh, N. Y.

Smokestacks. (Iron and Steel.)
Chattanooga Boiler & Tank Co., Chat'n'ga, Tenn.
Keeler Co., E. Williamsport, Pa.
Lombard Iron Works, Augusta, Ga.
Petroleum Iron Works Co., Sharon, Pa.
Ruemmel-Dawley Mfg. Co., St. Louis, Mo.
Schiffel's Sons Co., J. S., Macon, Ga.
Virginia Bridge & Iron Co., Roanoke, Va.

Smokestacks. (Steel-Concrete.)
Weber Chimney Co., Chicago, Ill.

Spikes. (See Nails and Spikes.)

Springs. (Machinery, Railway, Spiral.)
American Steel & Wire Co., Chicago, Ill.
Cary Spring Works, New York, N. Y.
Raymond Mfg. Co., Ltd., Corry, Pa.

Sprinklers. (Automatic.)
General Fire Extinguisher Co., Providence, R. I.

Sprinkler Systems. (Automatic.)
General Fire Extinguisher Co., Providence, R. I.

- Stamp Mills.**
Mackelburg Iron Works, Charlotte, N. C.
- Stamps. (Brass, Rubber.)**
Bennett Rubber Stamp & Seal Co., Atlanta, Ga.
Dixie Seal & Stamp Co., Atlanta, Ga.
- Standpipes.**
Chattanooga Boiler & Tank Co., Chat'n'ga, Tenn.
Chicago Bridge & Iron Wks., Chicago, Ill.
Hartley Boiler Works, Montgomery, Ala.
Keeler Co., E. Williamsport, Pa.
Petroleum Iron Works Co., Sharon, Pa.
Rennell-Dawley Mfg. Co., St. Louis, Mo.
- Stapling Machinery. (Fruit Package Basket, etc.)**
Karnac Machine Co., St. Joseph, Mich.
- Stationers. (Envelopes, Letter and Bill Heads, etc.)**
Young & Selden Co., Baltimore, Md.
- Steam Feeds.**
Houle Steam Feed Works, Meridian, Miss.
- Steam Fitters' Supplies.**
Sauders' Sons, D., Yonkers, N. Y.
- Steam Heating.**
Keeler Co., E. Williamsport, Pa.
Peck-Hammond Co., The, Cincinnati, O.
- Steamship Lines.**
Baltimore Steam Packet Co., Baltimore, Md.
Chesapeake Steamship Co., Baltimore, Md.
Merchant & Miners' Trans. Co., Baltimore, Md.
- Steam Separators.**
Wopes Mfg. Co., Springfield, O.
Lindstrom's Mach. Wks., John T., Allentown, Pa.
- Steam Shovel Chains.**
Weimer Chain & Iron Co., Lebanon, Pa.
- Steam Shovels. [See Excavating Machinery.]**
- Steam Specialties.**
Fowell Co., Wm., Cincinnati, O.
- Steam Traps.**
American Blower Co., Detroit, Mich.
Jenkins Bros., New York, N. Y.
Lindstrom's Mach. Wks., John T., Allentown, Pa.
- Steel.**
American Rolling Mill Co., Middletown, O.
Dietrich Bros., Baltimore, Md.
Field & Co., Inc., Philadelphia, Pa.
Hoffman & Co., R. C., Baltimore, Md.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Lehigh Valley Steel Co., Bethlehem, Pa.
Oliver Iron & Steel Co., Pittsburgh, Pa.
Republic Iron & Steel Co., Youngstown, O.
Tennessee Coal, Iron & R. R. Co., Birm'gh'm, Ala.
Wood Iron & Steel Co., Alan, Philadelphia, Pa.
- Steel. (Open Hearth.)**
Erie Forge Co., Erie, Pa.
- Steels. (Tool.)**
Field & Co., Inc., Philadelphia, Pa.
Jencks & Sons, Inc., Wm., St. Louis, Mo.
- Steel. (Vanadium.)**
Carnegie Steel Co., Pittsburgh, Pa.
- Steel Buildings. (Designers, Builders.)**
American Bridge Co. of New York, New York, N. Y.
Champion Bridge Co., Wilmington, O.
Chesapeake Iron Works, Baltimore, Md.
Chicago Bridge & Iron Wks., Chicago, Ill.
Farris Bridge Co., Pittsburgh, Pa.
Kansas Valley Bridge & Iron Co., Leavenworth, Kan.
Phoenix Iron Co., Philadelphia, Pa.
Roanoke Bridge Co., Roanoke, Va.
Schreiber & Sons Co., The L., Cincinnati, O.
Shead Architectural Iron Works, Louisville, Ky.
Virginia Bridge & Iron Co., Roanoke, Va.
- Steel Castings.**
Oracible Steel Castings Co., Lansdowne, Pa.
Hoffman & Co., R. C., Baltimore, Md.
Hessence Steel Casting Co., Pittsburgh, Pa.
- Steel Forms. (For Concrete Construction.)**
Raw Col. Steel Centering Co., Pittsburgh, Pa.
- Steel Plate Work.**
Casey-Hedges Co., Chattanooga, Tenn.
Chattanooga Boiler & Tank Co., Chat'n'ga, Tenn.
Chicago Bridge & Iron Wks., Chicago, Ill.
Hoffman & Co., R. C., Baltimore, Md.
Phoenix Iron Co., Philadelphia, Pa.
Republic Iron & Steel Co., Youngstown, O.
Rennell-Dawley Mfg. Co., St. Louis, Mo.
- Steel Protector. (Concrete Curb Steps, etc.)**
[See Protector Steel.]
- Steel Sheet Piling.**
Jones & Laughlin Steel Co., Pittsburgh, Pa.
- Stencils.**
Baltimore Office Supply Co., Baltimore, Md.
Dixie Seal & Stamp Co., Atlanta, Ga.
- Steps. (Extension for Railroad Coaches.)**
Blake Car Step Works, Charlotte, N. C.
- Stirrups. (Building.)**
Chesapeake Iron Works, Baltimore, Md.
- Stock Certificates, Bonds and Seals.**
Baltimore Office Supply Co., Baltimore, Md.
Dixie Seal & Stamp Co., Atlanta, Ga.
- Stokers. (Mechanical.)**
Babcock & Wilcox Co., New York, N. Y.
Harrisburg Fdry. & Mach. Works, Harrisburg, Pa.
Westinghouse Machine Co., Pittsburgh, Pa.
- Storage Batteries.**
McC. Storage Battery Co., The, Philadelphia, Pa.
Lee Electric Co., Baltimore, Md.
Westinghouse Machine Co., Pittsburgh, Pa.
- Strainers.**
Camron Steam Pump Wks., A. S., New York, N. Y.
- Structural Steel and Iron.**
American Bridge Co. of New York, New York, N. Y.
Belmont Iron Works, Inc., Philadelphia, Pa.
Carnegie Steel Co., Pittsburgh, Pa.
Champion Bridge Co., Wilmington, O.
Chesapeake Iron Works, Baltimore, Md.
Chicago Bridge & Iron Wks., Chicago, Ill.
Cincinnati Iron & Steel Co., Cincinnati, O.
Des Moines Bridge & Iron Co., Des Moines, Ia.
Dietrich Bros., Baltimore, Md.
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Jones & Laughlin Steel Co., Pittsburgh, Pa.
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Phoenix Iron Co., Philadelphia, Pa.
Republic Iron & Steel Co., Youngstown, O.
- Roanoke Bridge Co., Roanoke, Va.**
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Schreiber & Sons Co., The L., Cincinnati, O.
Shead Architectural Iron Works, Louisville, Ky.
Virginia Bridge & Iron Co., Roanoke, Va.
York Bridge Co., York, Pa.
- Stump Pullers.**
Zimmerman Steel Co., M. R., Leno Tree, Mo.
- Sugar-Mill Machinery.**
Pratt Engineering & Mach. Co., Atlanta, Ga.
- Sulphur.**
Union Sulphur Co., New York, N. Y.
- Super-Heaters. (Steam.)**
Babcock & Wilcox Co., New York, N. Y.
Power Specialty Co., New York, N. Y.
- Surveying Instruments.**
Keuffel & Esser, Hoboken, N. J.
Weber & Co., F., Philadelphia, Pa.
- Switchboards, Switches, etc.**
Engberg's Elect. & Mech. Wks., St. Joseph, Mich.
Fort Wayne Electric Works, Fort Wayne, Ind.
General Electric Co., Schenectady, N. Y.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.
- Switches. [See Railroad Frogs and Switches.]**
- Switchstands.**
American Valve & Meter Co., Cincinnati, O.
Weir Frog Co., Cincinnati, O.
- Tackle Blocks. (For Wire or Manila Rope.)**
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Dennison Mfg. Co., Boston, Mass.
- Tanks. (Iron and Steel.)**
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Caldwell Co., Inc., W. E., Louisville, Ky.
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Harry Bros. Co., Dallas, Tex.
Hartley Boiler Works, Montgomery, Ala.
Keeler Co., E. Williamsport, Pa.
Kennett Co., Chicago Heights, Ill.
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New Orleans Rfg. & Metal Wks., New Orleans, La.
Oil City Boiler Co., Oil City, Pa.
Petroleum Iron Works Co., Sharon, Pa.
Rennell-Dawley Mfg. Co., St. Louis, Mo.
Seale & Sons Co., Wm. B., Pittsburgh, Pa.
Schnefeld's Sons Co., J. S., Macon, Ga.
Snyder Pump & Well Co., Richmond, Va.
Tennessee Metal Culvert Co., Nashville, Tenn.
Virginia Bridge & Iron Co., Roanoke, Va.
Walsh & Weldner Boiler Co., Chattanooga, Tenn.
- Tanks. (Wood.)**
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Caldwell Co., Inc., W. E., Louisville, Ky.
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Snyder Pump & Well Co., Richmond, Va.
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- Telephones. (Supplies, Equipment.)**
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Western Electric Co., New York, N. Y.
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- Terra-cotta.**
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Maryland Terra-Cotta Co., Baltimore, Md.
Pomona Terra-Cotta Co., Pomona, N. C.
Southern Building Material Co., Norfolk, Va.
Stevens' Sons Co., H., Macon, Ga.
- Threshers.**
Cardwell Machine Co., Richmond, Va.
Case Threshing Mach. Co., J. I., Racine, Wis.
- Tie Plates. (Railways.)**
Virginia Railway Supply Co., Norfolk, Va.
- Tile. (Drain, Floor, etc.)**
Amer. Enam. Brick & Tile Co., New York, N. Y.
Hibb Sewer Pipe Co., Macon, Ga.
Oconee Brick & Tile Co., Milledgeville, Ga.
- Tile. (Mosaic.)**
Dagostin & Angellini Bros., Montgomery, Ala.
Southern Mosaic Tile Co., Birmingham, Ala.
- Tile. (Roofing.)**
National Roofing Tile Co., Lima, O.
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American Sheet & Tin Plate Co., Pittsburgh, Pa.
Merchant & Evans Co., Philadelphia, Pa.
- Tobacco Machinery.**
Buckeye Iron & Brass Works, Dayton, O.
Cardwell Machine Co., Richmond, Va.
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Manning, Maxwell & Moore, Inc., New York, N. Y.
Morris Twist Drill & Mach. Co., New Bedford, Mass.
- Tools. (Mechanical.)**
Starrett Co., L. S., Athol, Mass.
- Tools. (Pneumatic.)**
American Compressor & Pump Co., Baltimore, Md.
Chicago Pneumatic Tool Co., Chicago, Ill.
Independent Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
- Trenches.**
Wall Mfg. Supply Co., P., Allegheny, Pa.
- Towers. (Steel and Wood.)**
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Caldwell Co., Inc., W. E., Louisville, Ky.
Chattanooga Boiler & Tank Co., Chat'n'ga, Tenn.
Chicago Bridge & Iron Wks., Chicago, Ill.
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Des Moines Bridge & Iron Co., Des Moines, Ia.
- Traction Engines.**
Case Threshing Mach. Co., J. I., Racine, Wis.
- Tramway. (Overhead.)**
Northern Engineering Works, Detroit, Mich.
Spiegel, J. G., Reading, Pa.
- Tramway. (Wire Rope.)**
Broderick & Bascom Rope Co., St. Louis, Mo.
Caldwell & Sons Co., H. W., Chicago, Ill.
Link-Belt Co., Nictown (Philadelphia), Pa.
- Transformers.**
Crocker-Wheeler Co., Ampere, N. J.
Moloney Electric Co., St. Louis, Mo.
Triumph Electric Co., Cincinnati, O.
- Transmission Line Supplies. (Electric.)**
Electrical Engineers' Equip. Co., Chicago, Ill.
- Trench Excavator.**
American Steel Dredge Co., Ft. Wayne, Ind.
Fairbanks Steam Shovel Co., Marion, O.
Monaghan Machine Co., Chicago, Ill.
- Trucks. (Platform, Freight, Mill, Factory, etc.)**
Chase Fdry. & Mfg. Co., Columbus, O.
Clark Co., Geo. F., Windsor Locks, Conn.
Howe Scale Co., New York, N. Y.
Rome Scale & Mfg. Co., Rome, Ga.
- Trucks. (Storage Battery Auto.)**
Westinghouse Machine Co., Pittsburgh, Pa.
- Trucks. (Wood and Steel for Portable Machinery.)**
Empire Manufacturing Co., Quincy, Ill.
- Trust Companies. [See Bankers and Brokers.]**
- Tube Well Strainers.**
Cook Well Co., St. Louis, Mo.
- Tubes. (Boiler.)**
Cincinnati Iron & Steel Co., Cincinnati, O.
National Tube Co., Pittsburgh, Pa.
- Tubing.**
Field & Co., Inc., Philadelphia, Pa.
La Belle Iron Works, Steubenville, O.
National Tube Co., Pittsburgh, Pa.
Youngstown Sheet & Tube Co., The, Youngstown, O.
- Turbines. (Hydraulic.)**
Allis-Chalmers Co., Milwaukee, Wis.
Davis Foundry & Machine Works, Rome, Ga.
Dayton Globe Iron Works Co., Dayton, O.
Leffel & Co., James, Springfield, O.
Poole Engineering & Mach. Co., Baltimore, Md.
Smith Co., S. Morgan, York, Pa.
Trump Mfg. Co., Springfield, O.
- Turbines. (Steam.)**
Allis-Chalmers Co., Milwaukee, Wis.
De Laval Steam Turbine Co., Trenton, N. J.
Emerson Steam Pump Co., Alexandria, Va.
Ft. Wayne Electric Works, Ft. Wayne, Ind.
General Electric Co., Schenectady, N. Y.
Southwick Fdry. & Mach. Co., Philadelphia, Pa.
Terry Steam Turbine Co., New York, N. Y.
Western Electric Co., New York, N. Y.
Westinghouse Machine Co., Pittsburgh, Pa.
- Turntables.**
Virginia Bridge & Iron Co., Roanoke, Va.
- Turpentine.**
Atlantic Turpentine & Refin'g Co., Savannah, Ga.
- Tuyeres. (Copper and Bronze.)**
Keystone Bronze Co., Pittsburgh, Pa.
- Twine.**
American Manufacturing Co., New York, N. Y.
Columbian Rope Co., Auburn, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
Turner Co., J. Spencer, New York, N. Y.
Whitlock Cordage Co., New York, N. Y.
- Twine Machinery.**
Haskell-Dawes Machine Co., Boston, Mass.
- Twisting Machinery.**
Haskell-Dawes Machine Co., Boston, Mass.
- Unions.**
Dart Manufacturing Co., E. M., Providence, R. I.
- Vacuum Cleaning Apparatus.**
Blaisdell Machinery Co., Bradford, Pa.
- Valves.**
Bourlon Copper & Brass Wks. Co., Cincinnati, O.
Columbian Iron Works, Chattanooga, Tenn.
Frick Co., The, Waynesboro, Pa.
Glamorgan Pipe & Foundry Co., Lynchburg, Va.
Jenkins Bros., New York, N. Y.
National Tube Co., Pittsburgh, Pa.
Powell Co., Wm., Cincinnati, O.
York Mfg. Co., York, Pa.
- Varnish.**
Berry Bros., Ltd., Detroit, Mich.
Glidden Varnish Co., Cleveland, O.
- Vencer Machines.**
Titus, E. E., Petersburg, Va.
- Ventilating Apparatus. (Engineers' and Contractors.)**
American Blower Co., Detroit, Mich.
Buffalo Forge Co., Buffalo, N. Y.
Peck-Hammond Co., Cincinnati, O.
Sturtevant Co., B. F., Hyde Park, Mass.
- Ventilators.**
Merchant & Evans Co., Philadelphia, Pa.
- Wagons. (Dump.)**
Eagle Wagon Works, Auburn, N. Y.
Troy Wagon Works Co., Troy, O.
Western Wheel Scraper Co., Aurora, Ill.
- Wagons. (Ice, Bakers' and Laundry.)**
Koehnig & Luhrs Wagon Co., Quincy, Ill.
- Wall Plaster.**
King & Co., J. B., New York, N. Y.
- Wall Plugs. (Galvanized.)**
Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.
Wicks Mfg. Co., Milton, O., Glen Cove, N. Y.
- Wall Ties.**
Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.
Page Woven Wire Fence Co., Adrain, Mich.
- Washers. (Ore and Phosphate.)**
Bailey-Lobby Co., Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
- Washers and Rivets. [See Bolts, Nuts, Rivets, Studs and Washers.]**
- Water Filters. [See Filters, Water, for Domestic and Industrial Purposes.]**
- Water Meters.**
American Valve & Meter Co., Cincinnati, O.
- Waterproofing. (For Brick Work.)**
Barrett Mfg. Co., Philadelphia, Pa.
Carolina Portland Cement Co., Charleston, S. C.
Cerecitt Waterproofing Co., Chicago, Ill.
National Roofing Co., Tonawanda, N. Y.
- Waterproofing. (For Cement Mortar.)**
Cerecitt Waterproofing Co., Chicago, Ill.
- Waterproofing. (For Concrete.)**
Barrett Mfg. Co., Philadelphia, Pa.
Cerecitt Waterproofing Co., Chicago, Ill.
National Roofing Co., Tonawanda, N. Y.
- Waterproof Compound. (Liquid.)**
Carolina Portland Cement Co., Charleston, S. C.
National Roofing Co., Tonawanda, N. Y.
- Water-Softening Apparatus. (Purifying.)**
American Water Softener Co., Philadelphia, Pa.
Dodge Manufacturing Co., Mishawaka, Ind.
Gem City Boiler Co., Dayton, O.
Kennett Co., Chicago Heights, Ill.
N. Y. Cont. Jewell Filtration Co., New York, N. Y.
Roberts Filter Mfg. Co., Philadelphia, Pa.
Seale & Sons Co., Wm. B., Pittsburgh, Pa.
Tucker & Lorton, Charlotte, N. C.
- Water Supply Systems. (Town, Home, Rail-road, etc.)**
Rife Engine Co., New York, N. Y.
- Water-Wheels. [See Turbines. (Hydraulic).]**
- Water-Works Supplies and Appliances.**
American Cast Iron Pipe Co., Birmingham, Ala.
American Pipe & Constr. Co., Philadelphia, Pa.
Hill & Sever Pipe Co., Macon, Ga.
Blount, C. F., Atlanta, Ga.
Bourbon Copper & Brass Wks. Co., Cincinnati, O.
Coldwell-Wilcox Co., Newburgh, N. Y.
Columbian Iron Works, Chattanooga, Tenn.
Glamorgan Pipe & Foundry Co., Lynchburg, Va.
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
Leadbite Co., The, Philadelphia, Pa.
McWane Pipe Works, Lynchburg, Va.
Pomona Terra-Cotta Co., Pomona, N. C.
Stevens' Sons Co., H., Macon, Ga.
U. S. Cast Iron Pipe & Fdry. Co., New York, N. Y.
- Weather. (Recording Liquid.)**
Worthington, Henry R., New York, N. Y.
- Well Contractors. (Oil, Artesian, etc.)**
Cook Well Co., The, St. Louis, Mo.
Hughes Specialty Well Drill Co., Charleston, S. C.
Stothoff Bros., Flemington, N. J.
Snyder Pump & Well Co., Richmond, Va.
- Well Tools and Supplies.**
Cook Well Co., The, St. Louis, Mo.
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
Williams Bros., Ithaca, N. Y.
- Wheels and Axles.**
Empire Manufacturing Co., Quincy, Ill.
Oliver Mfg. Co., W. J., Knoxville, Tenn.
- Wheelbarrows and Trucks.**
Syracuse Chilled Plow Co., Syracuse, N. Y.
- Wheels. (Steel and Steel Tired.)**
Carnegie Steel Co., Pittsburgh, Pa.
Empire Manufacturing Co., Quincy, Ill.
- Window Frames and Sashes. (Fireproof.)**
Detroit Steel Products Co., Detroit, Mich.
United States Metal Products Co., New York, N. Y.
Voigtmann & Co., Chicago, Ill.
- Window Guards. (Wire.) [See Wire Goods.]**
- Windmills.**
Baltimore Cooperage Co., Baltimore, Md.
Caldwell Co., Inc., W. E., Louisville, Ky.
- Wire Insulating.**
General Electric Co., Schenectady, N. Y.
- Wire. (Barbed Wire, etc.)**
American Steel & Wire Co., Chicago, Ill.
Roebbling's Sons Co., J. A., Trenton, N. J.
Youngstown Sheet & Tube Co., Youngstown, O.
- Wire Cloth. (Iron, Steel, Brass, etc.)**
American Steel & Wire Co., Chicago, Ill.
Caldwell & Sons Co., The H. W., Chicago, Ill.
Diamond Wire Products Co., Columbus, O.
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New Jersey Wire Cloth Co., Trenton, N. J.
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Buckeye Wire & Iron Works Co., Columbus, O.
Cincinnati Mfg. Co., Cincinnati, O.
Diamond Wire Products Co., Columbus, O.
Low Wire Works Co., Louisville, Ky.
Dufur & Co., Baltimore, Md.
Dufur, Baggett & Co., Baltimore, Md.
Meyers Mfg. Co., The Fred J., Hamilton, O.
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- Wire Netting.**
American Steel & Wire Co., Chicago, Ill.
New Jersey Wire Cloth Co., Trenton, N. J.
- Wire Rope.**
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Broderick & Bascom Rope Co., St. Louis, Mo.
Contractors' Plant Mfg. Co., Inc., Buffalo, N. Y.
Roebbling's Sons Co., J. A., Trenton, N. J.
Williamsport Wire Rope Co., Williamsport, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.
- Wire Rope Clips.**
American Holst & Derrick Co., St. Paul, Minn.
- Wire Rope Thimbles.**
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- Wood Blocks. (For Paving and Factory Floors.)**
U. S. Wood Preserving Co., New York, N. Y.
- Woodboring Machines.**
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Ingersoll-Rand Co., New York, N. Y.
- Wood-Fiber Planter.**
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Shimer & Sons, Samuel J., Milton, Pa.
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Ads. marked * appear every other week.
Ads. marked † appear in first issue of the month.
Ads. marked ‡ not in this issue.

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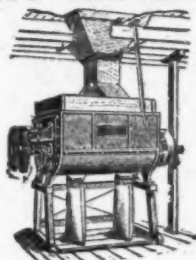
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Armstrong Mfg. Co.	26	Chattanooga Sheet Metal & Roof	38					Starrett Co., L. S.	39
Arnold Co., The	26	Chattanooga Sheet Metal & Roof	38					Steel Protected Concrete Co.	39
Arnold Sand & Gravel Co.	46	Chattanooga Sheet Metal & Roof	38					Steel Rail Supply Co.	39
Asphalt Road Rolling Co.	78	Chattanooga Sheet Metal & Roof	38					Steele & Sons, J. O.	39
Atlanta, Birmingham & Atlan-	105	Chattanooga Sheet Metal & Roof	38					Stevens, John A.	39
tic Railway	105	Chattanooga Sheet Metal & Roof	38					Stevens & Sons Co., H.	39
Atlanta Terra Cotta Co.	38	Chattanooga Sheet Metal & Roof	38					Stewart Heater Co., The	39
Atlanta & West Point R. R. Co.	105	Chattanooga Sheet Metal & Roof	38					Stone Mountain Granite Corp.	39
Atlantic Tarapentine	43	Chattanooga Sheet Metal & Roof	38					Standard Blower & Metal Mfg.	39
Atlas Engine Works	77	Chattanooga Sheet Metal & Roof	38					Standard Cross Tie Mach. Co.	39
Austin Mfg. Co.	43	Chattanooga Sheet Metal & Roof	38					Standard Gas Power Co.	39
Austin-Western Co. Ltd., The	99	Chattanooga Sheet Metal & Roof	38					Standard Oil Co., Inc.	39
Aycock, R. N.	89	Chattanooga Sheet Metal & Roof	38					Standard Paint Co.	39
		Chattanooga Sheet Metal & Roof	38					Standard Portland Cement Co.	39
		Chattanooga Sheet Metal & Roof	38					Standard Roller Bearing Co.	39
		Chattanooga Sheet Metal & Roof	38					Standard Roofing Co.	39
		Chattanooga Sheet Metal & Roof	38					Standard Scale & Sup. Co.	39
		Chattanooga Sheet Metal & Roof	38					Starr Co., B. F.	39
		Chattanooga Sheet Metal & Roof	38					Starrett Co., L. S.	39
		Chattanooga Sheet Metal & Roof	38					Steel Protected Concrete Co.	39
		Chattanooga Sheet Metal & Roof	38					Steel Rail Supply Co.	39
		Chattanooga Sheet Metal & Roof	38					Steele & Sons, J. O.	39
		Chattanooga Sheet Metal & Roof	38					Stevens, John A.	39
		Chattanooga Sheet Metal & Roof	38					Stevens & Sons Co., H.	39
		Chattanooga Sheet Metal & Roof	38					Stewart Heater Co., The	39
		Chattanooga Sheet Metal & Roof	38					Stone Mountain Granite Corp.	39
		Chattanooga Sheet Metal & Roof	38					Standard Blower & Metal Mfg.	39
		Chattanooga Sheet Metal & Roof	38					Standard Cross Tie Mach. Co.	39
		Chattanooga Sheet Metal & Roof	38					Standard Gas Power Co.	39
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		Chattanooga Sheet Metal & Roof	38					Standard Paint Co.	39
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		Chattanooga Sheet Metal & Roof	38					Steele & Sons, J. O.	39
		Chattanooga Sheet Metal & Roof	38					Stevens, John A.	39
		Chattanooga Sheet Metal & Roof	38					Stevens & Sons Co., H.	39
		Chattanooga Sheet Metal & Roof	38					Stewart Heater Co., The	39
		Chattanooga Sheet Metal & Roof	38					Stone Mountain Granite Corp.	39
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		Chattanooga Sheet Metal & Roof	38					Standard Gas Power Co.	39
		Chattanooga Sheet Metal & Roof	38					Standard Oil Co., Inc.	39
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		Chattanooga Sheet Metal & Roof	38					Steele & Sons, J. O.	39
		Chattanooga Sheet Metal & Roof	38						

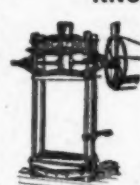
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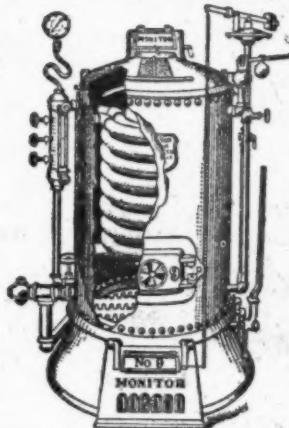
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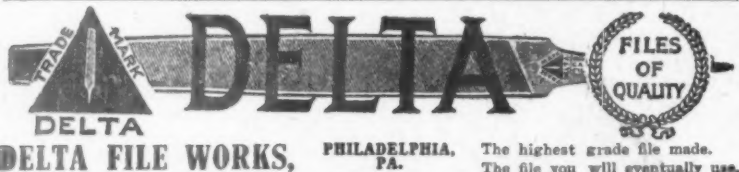
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